TOSHIBA

FILE NO. 333-9703
SUPPLEMENT

SERVICE MANUAL

VIDEO WALL PROJECTION UNIT

P5031E
P5032E

— SUMMARY —

This model is based on P5031U and P5032U. This service manual covers only different portions from service manual (File No. 330-9702) for P5031U, P5032U.

The technical information included in the service manual (File No. 330-9702) for P5031U, P5032U can be used for P5031E, P5032E servicing.

PRINTED IN JAPAN, Jun., 1997 Ⓢ

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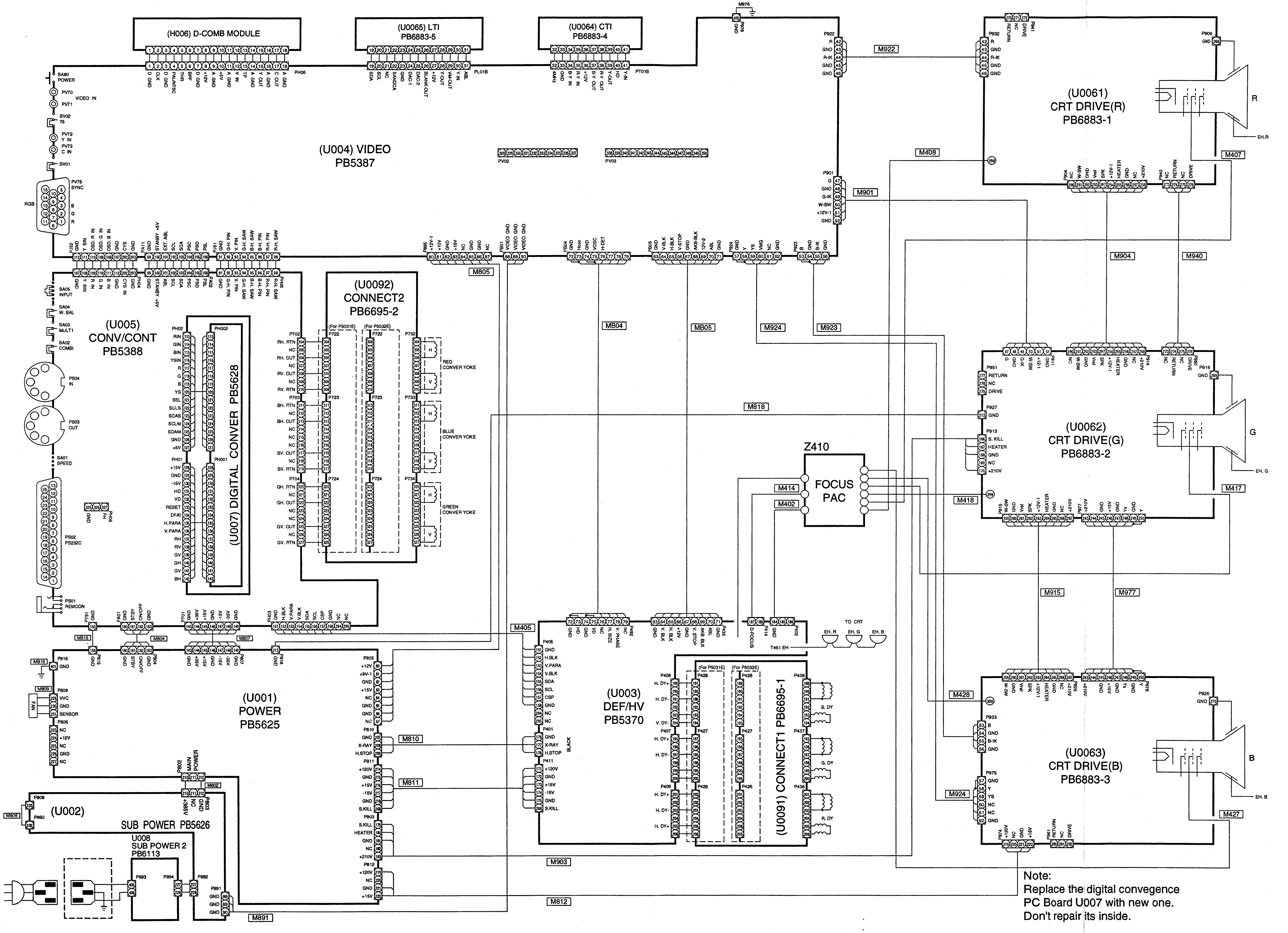
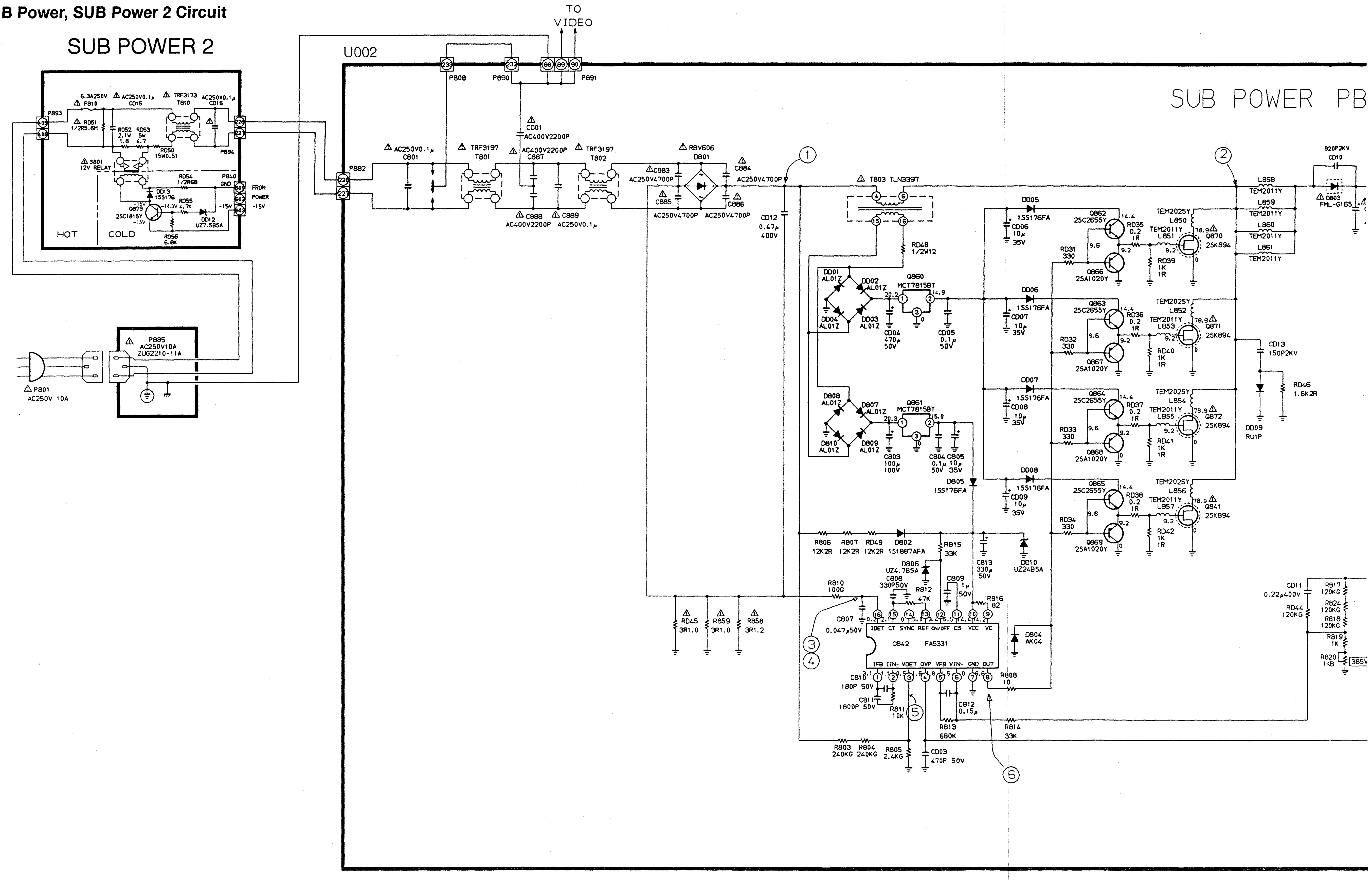
3. WIRING SCHEMATIC DIAGRAM


(H006) D-COMB MODULE
(U0065) LTI PB6883-5
(U0064) CTI PB6883-4
(U004) VIDEO PB5387
(U005) CONV/CONT PB5388
(U007) DIGITAL CONVER PB5628
(U0092) CONNECT2 PB6695-2
(U0061) CRT DRIVE(R) PB6883-1
(U0062) CRT DRIVE(G) PB6883-2
(U0063) CRT DRIVE(B) PB6883-3
Z410
FOCUS PAC
(U001) POWER PB5625
(U002) SUB POWER PB5626
U008 SUB POWER 2 PB6113
(U003) DEF/HV PB5370
(U0091) CONNECT1 PB6695-1
RED CONVER YOKE
BLUE CONVER YOKE
GREEN CONVER YOKE
TO CRT
EH. R
EH. G
EH. B
T461 EH
R
G
B
RGB
FAN
M922
M408
M901
M904
M940
M407
M805
MB04
MB05
M924
M923
M818
M414
M402
M418
M417
M915
M977
M405
M815
M804
M807
M818
M809
M810
M811
M802
M808
M891
M903
M812
M428
M924
M427
M976
B. DY
G. DY
R. DY

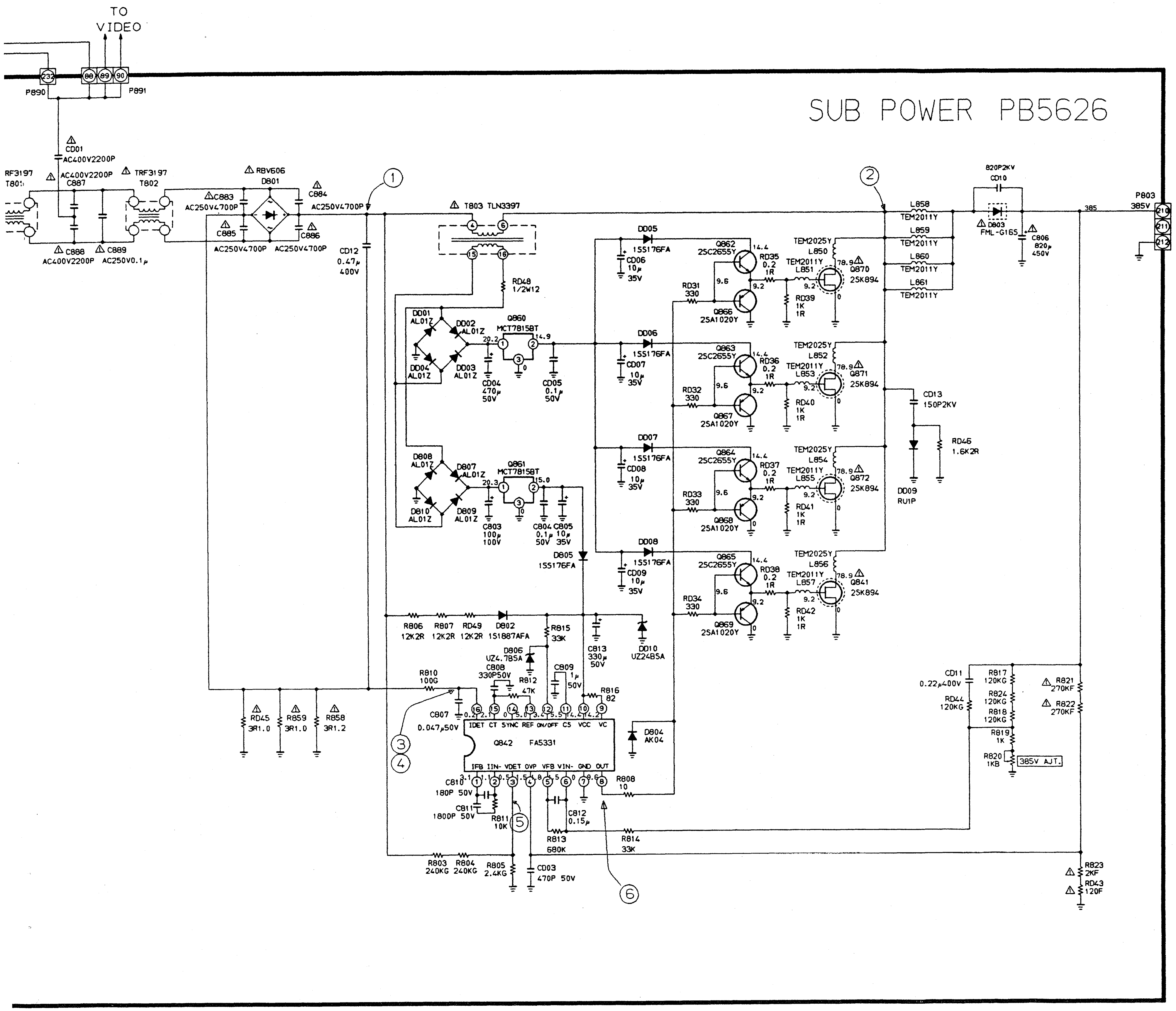
Note:
Replace the digital convegence PC Board U007 with new one.
Don't repair its inside.

4. SCHEMATIC DIAGRAMS

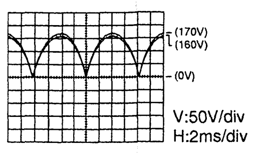
4-1. SUB Power, SUB Power 2 Circuit



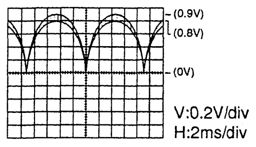
1
2
3
4
5
SUB POWER 2
SUB POWER
6
7
8
9
10
11
A
B
C
D
E
F
G
SUB POWER 2
TO VIDEO
U002
SUB POWER PB
P893
P894
P840
P808
P890
P891
P882
P885
AC250V10A
ZUG2210-11A
P801
AC250V 10A
6.3A250V F810
AC250V0.1μ CD15
TRF3173 T810
AC250V0.1μ CD16
RD51 1/2R5.6M
RD52 2.1W 1.8
RD53 5W 4.7
RD50 15W0.51
S801 12V RELAY
RD54 1/2R68
DD13 1SS176
Q873 2SC1815Y
RD55 4.7K
DD12 UZ7.5BSA
RD56 6.8K
FROM POWER -15V
HOT
COLD
AC250V0.1μ C801
TRF3197 T801
CD01 AC400V2200P
AC400V2200P C887
TRF3197 T802
C888 AC400V2200P
C889 AC250V0.1μ
RBV606 D801
C883 AC250V4700P
C884 AC250V4700P
C885 AC250V4700P
C886 AC250V4700P
CD12 0.47μ 400V
T803 TLN3397
RD48 1/2W12
DD01 AL01Z
DD02 AL01Z
DD03 AL01Z
DD04 AL01Z
Q860 MCT78158T
CD04 470μ 50V
CD05 0.1μ 50V
D808 AL01Z
D807 AL01Z
D810 AL01Z
D809 AL01Z
Q861 MCT78158T
C803 100μ 100V
C804 0.1μ 50V
C805 10μ 35V
D805 1SS176FA
DD05 1SS176FA
DD06 1SS176FA
DD07 1SS176FA
DD08 1SS176FA
CD06 10μ 35V
CD07 10μ 35V
CD08 10μ 35V
CD09 10μ 35V
RD31 330
RD32 330
RD33 330
RD34 330
Q862 2SC2655Y
Q863 2SC2655Y
Q864 2SC2655Y
Q865 2SC2655Y
Q866 2SA1020Y
Q867 2SA1020Y
Q868 2SA1020Y
Q869 2SA1020Y
RD35 0.2 1R
RD36 0.2 1R
RD37 0.2 1R
RD38 0.2 1R
RD39 1K 1R
RD40 1K 1R
RD41 1K 1R
RD42 1K 1R
TEM2025Y L850
TEM2025Y L852
TEM2025Y L854
TEM2025Y L856
TEM2011Y L851
TEM2011Y L853
TEM2011Y L855
TEM2011Y L857
Q870 2SK894
Q871 2SK894
Q872 2SK894
Q841 2SK894
L858 TEM2011Y
L859 TEM2011Y
L860 TEM2011Y
L861 TEM2011Y
820P2KV CD10
D803 FML-G16S
CD13 150P2KV
DD09 RU1P
RD46 1.6K2R
R806 12K2R
R807 12K2R
RD49 12K2R
D802 1S1887AFA
R815 33K
D806 UZ4.7BSA
C808 330P50V
R812 47K
C809 1μ 50V
C813 330μ 50V
DD10 UZ24BSA
R816 82
R810 100G
C807 0.047μ50V
Q842 FA5331
IDET CT SYNC REF ON/OFF CS VCC VC
IFB IIN- VDET OVP VFB VIN- GND OUT
D804 AK04
C810 180P 50V
C811 1800P 50V
R811 10K
C812 0.15μ
R808 10
R813 680K
R814 33K
R803 240KG
R804 240KG
R805 2.4KG
CD03 470P 50V
RD45 3R1.0
R859 3R1.0
R858 3R1.2
CD11 0.22μ400V
RD44 120KG
R817 120KG
R824 120KG
R818 120KG
R819 1K
R820 1KB
385V
①
②
③
④
⑤
⑥


TO VIDEO
P890
P891
232
88 89 90
SUB POWER PB5626
CD01 AC400V2200P
RF3197 T801
AC400V2200P C887
TRF3197 T802
RBV606 D801
C883 AC250V4700P
C884 AC250V4700P
C885 AC250V4700P
C886 AC250V4700P
C888 AC400V2200P
C889 AC250V0.1μ
CD12 0.47μ 400V
T803 TLN3397
RD48 1/2W12
DD01 AL01Z
DD02 AL01Z
DD03 AL01Z
DD04 AL01Z
Q860 MCT7815BT
CD04 470μ 50V
CD05 0.1μ 50V
DD08 AL01Z
DD07 AL01Z
DD10 AL01Z
DD09 AL01Z
Q861 MCT7815BT
C803 100μ 100V
C804 0.1μ 50V
C805 10μ 35V
D805 1SS176FA
DD05 1SS176FA
CD06 10μ 35V
DD06 1SS176FA
CD07 10μ 35V
DD07 1SS176FA
CD08 10μ 35V
DD08 1SS176FA
CD09 10μ 35V
Q862 2SC2655Y
Q863 2SC2655Y
Q864 2SC2655Y
Q865 2SC2655Y
Q866 2SA1020Y
Q867 2SA1020Y
Q868 2SA1020Y
Q869 2SA1020Y
RD31 330
RD32 330
RD33 330
RD34 330
RD35 0.2 1R
RD36 0.2 1R
RD37 0.2 1R
RD38 0.2 1R
RD39 1K 1R
RD40 1K 1R
RD41 1K 1R
RD42 1K 1R
L850 TEM2025Y
L851 TEM2011Y
L852 TEM2025Y
L853 TEM2011Y
L854 TEM2025Y
L855 TEM2011Y
L856 TEM2025Y
L857 TEM2011Y
Q870 2SK894
Q871 2SK894
Q872 2SK894
Q841 2SK894
L858 TEM2011Y
L859 TEM2011Y
L860 TEM2011Y
L861 TEM2011Y
820P2KV CD10
D803 FML-G16S
C806 820μ 450V
P803 385V
385
210 211 212
TO POWER
CD13 150P2KV
RD46 1.6K2R
DD09 RU1P
R806 12K2R
R807 12K2R
RD49 12K2R
D802 1S1887AFA
R815 33K
D806 UZ4.7BSA
C808 330P50V
R812 47K
C809 1μ 50V
C813 330μ 50V
DD10 UZ24BSA
R816 82
R810 100G
C807 0.047μ50V
Q842 FA5331
IDET CT SYNC REF ON/OFF CS VCC VC
IFB IIN- VDET OVP VFB VIN- GND OUT
D804 AK04
R808 10
C810 180P 50V
C811 1800P 50V
R811 10K
C812 0.15μ
R813 680K
R814 33K
R803 240KG
R804 240KG
R805 2.4KG
CD03 470P 50V
RD45 3R1.0
R859 3R1.0
R858 3R1.2
CD11 0.22μ400V
RD44 120KG
R817 120KG
R824 120KG
R818 120KG
R819 1K
R820 1KB
385V AJT.
R821 270KF
R822 270KF
R823 2KF
RD43 120F
14.4
9.6
9.2
78.9
20.2
14.9
20.3
15.0
① ② ③ ④ ⑤ ⑥

① T803 ④



⑤ Q842 ③



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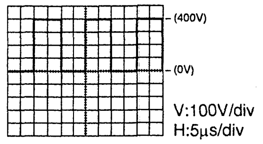

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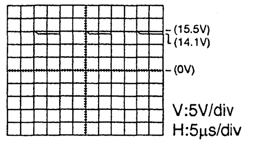
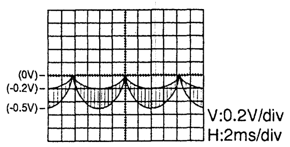
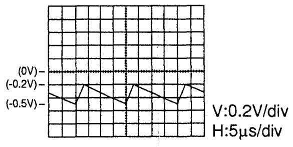


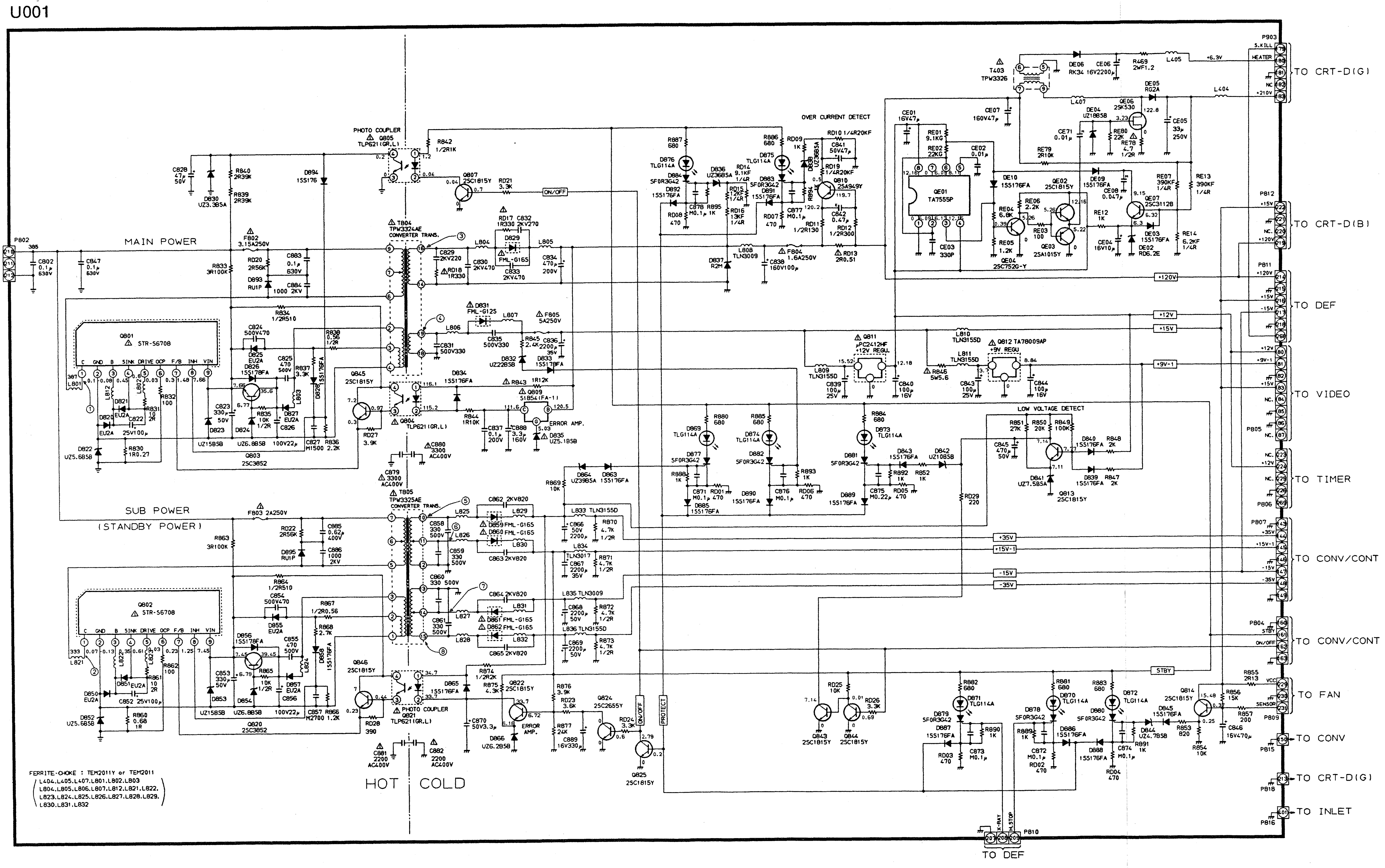
③ Q842 ⑯



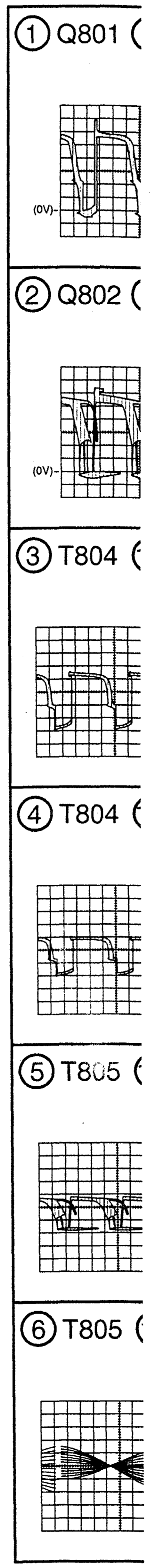
④ Q842 ⑯

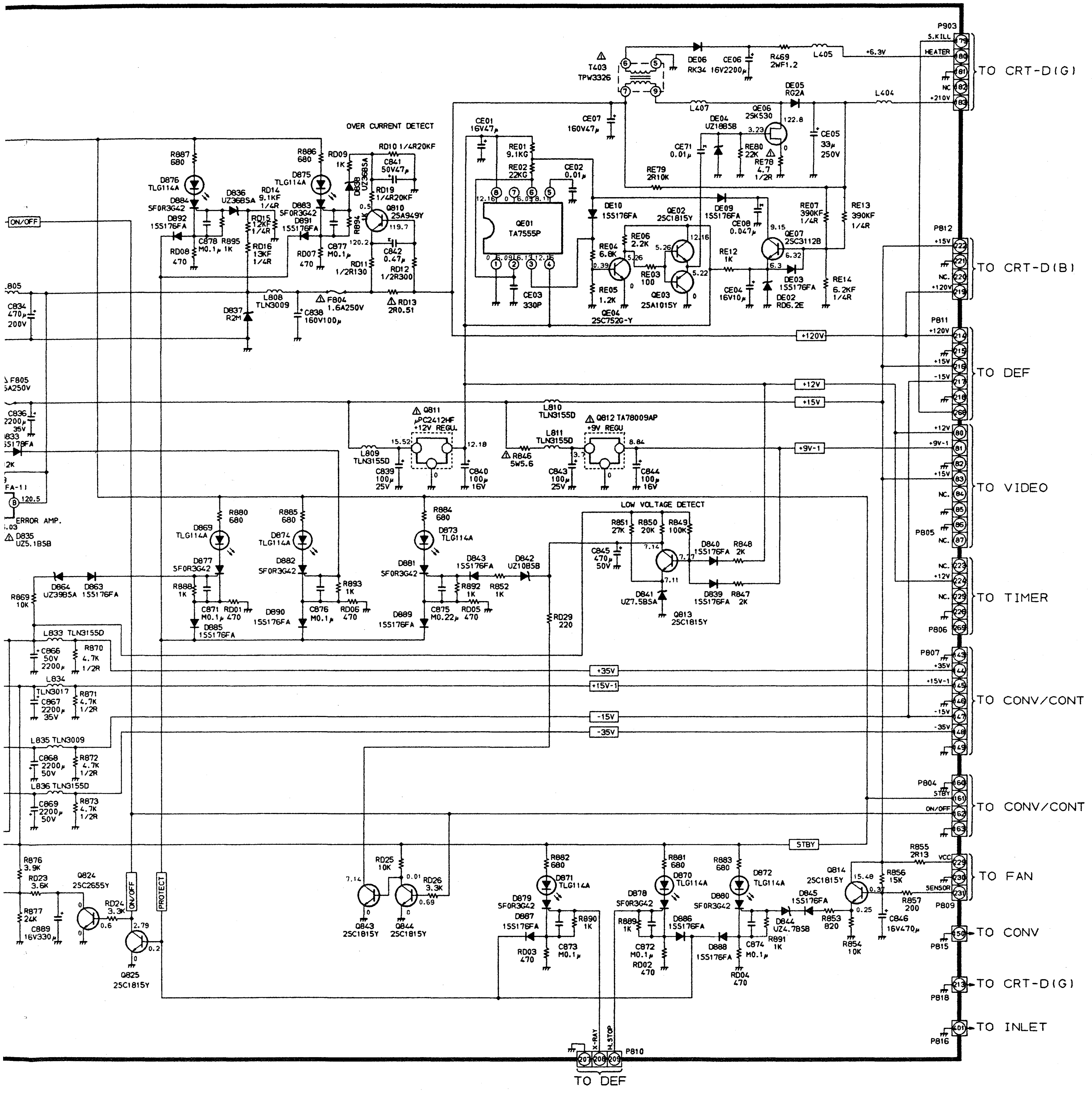


4-2. Power Circuit

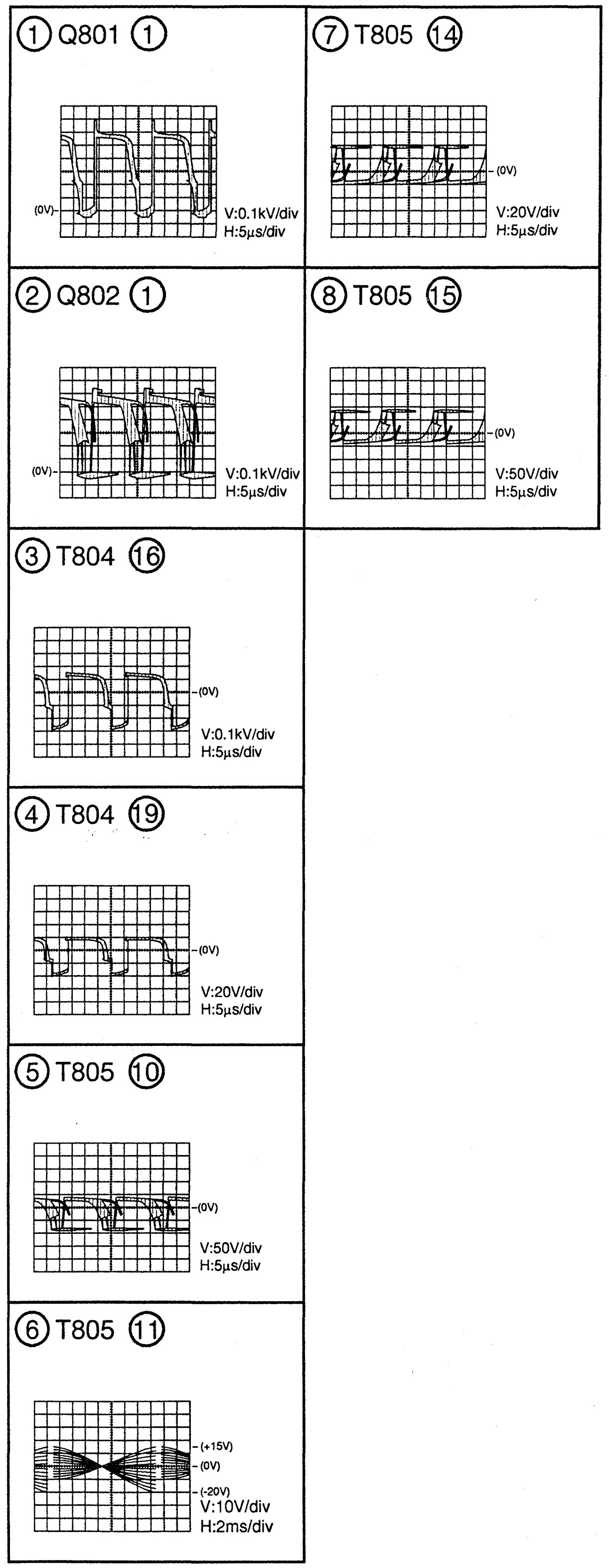

1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
U001
FROM SUBPOWER
P802
MAIN POWER
SUB POWER (STANDBY POWER)
Q801 STR-S6708
Q802 STR-S6708
C GND B SINK DRIVE OCP F/B INH VIN
PHOTO COUPLER Q805 TLP621(GR,L)
Q804 TLP621(GR,L)
PHOTO COUPLER Q821 TLP621(GR,L)
T804 TPW3324AE CONVERTER TRANS.
T805 TPW3325AE CONVERTER TRANS.
Q807 2SC1815Y
Q845 2SC1815Y
Q846 2SC1815Y
Q809 S1854(FA-1)
ERROR AMP.
Q822 2SC1815Y
Q824 2SC2655Y
Q825 2SC1815Y
ON/OFF
PROTECT
OVER CURRENT DETECT
Q810 2SA949Y
Q811 μPC2412HF +12V REGU.
Q812 TA78009AP +9V REGU
LOW VOLTAGE DETECT
Q813 2SC1815Y
Q814 2SC1815Y
Q843 2SC1815Y
Q844 2SC1815Y
QE01 TA7555P
QE02 2SC1815Y
QE03 2SA1015Y
QE04 2SC752G-Y
QE06 2SK530
QE07 2SC3112B
T403 TPW3326
+6.3V
+210V
+120V
+12V
+15V
+9V-1
+35V
+15V-1
-15V
-35V
STBY
HOT
COLD
P903 TO CRT-D(G)
P812 TO CRT-D(B)
P811 TO DEF
TO VIDEO
P805 TO TIMER
P807 TO CONV/CONT
P804 TO CONV/CONT
TO FAN
P809
P815 TO CONV
P818 TO CRT-D(G)
P816 TO INLET
P810 TO DEF
X-RAY
H.STOP
FERRITE-CHOKE : TEM2011Y or TEM2011
(L404,L405,L407,L801,L802,L803
L804,L805,L806,L807,L812,L821,L822,
L823,L824,L825,L826,L827,L828,L829,
L830,L831,L832)

Power circ



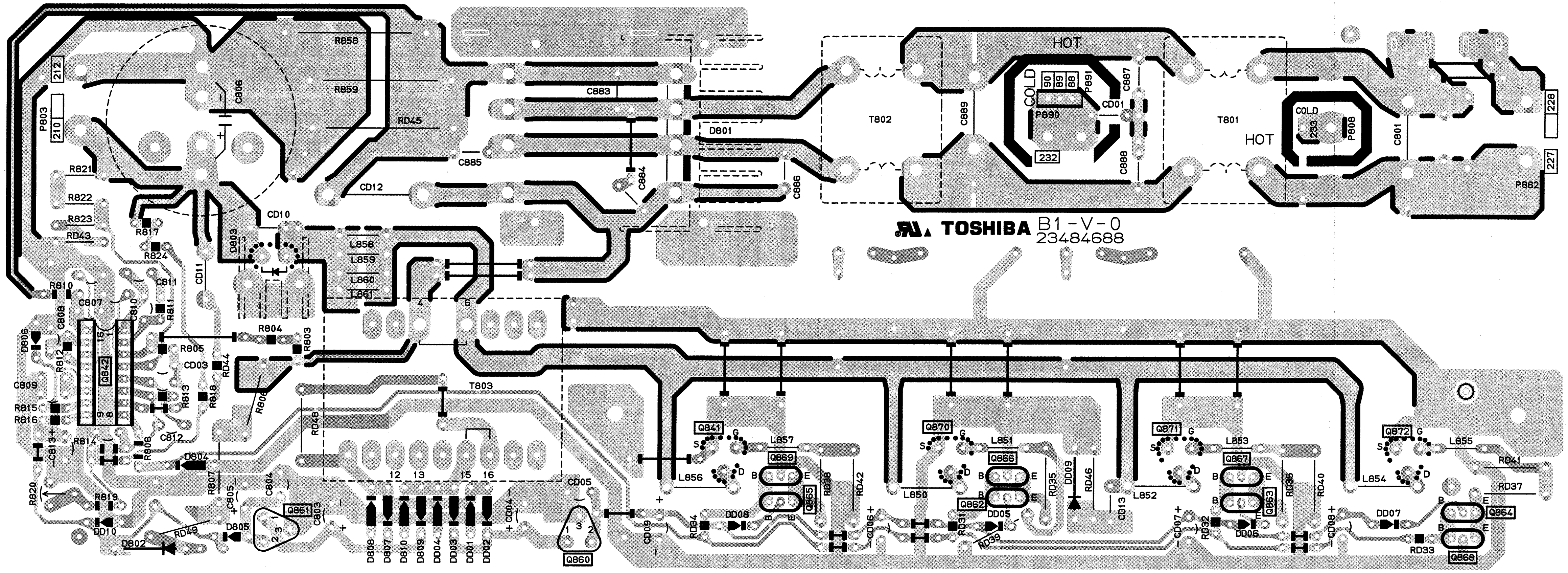

OVER CURRENT DETECT
LOW VOLTAGE DETECT
ERROR AMP.
T403 TPW3326
QE01 TA7555P
Q810 2SA949Y
Q811 μPC2412HF +12V REGU.
Q812 TA78009AP +9V REGU.
Q813 2SC1815Y
Q814 2SC1815Y
Q824 2SC2655Y
Q825 2SC1815Y
Q843 2SC1815Y
Q844 2SC1815Y
QE02 2SC1815Y
QE03 2SA1015Y
QE04 2SC752G-Y
QE06 2SK530
QE07 2SC3112B
F804 1.6A250V
ON/OFF
PROTECT
STBY
+120V
+12V
+15V
+9V-1
+35V
+15V-1
-15V
-35V
P903
P812
P811
P805
P806
P807
P804
P809
P815
P818
P816
P810
X-RAY
H.STOP
TO CRT-D(G)
TO CRT-D(B)
TO DEF
TO VIDEO
TO TIMER
TO CONV/CONT
TO CONV/CONT
TO FAN
TO CONV
TO CRT-D(G)
TO INLET
TO DEF

Power circuit wave forms

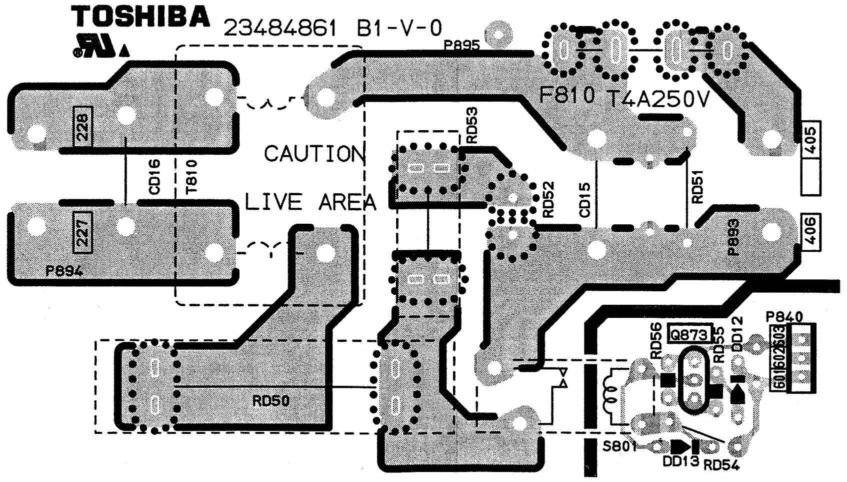


5. PC BOARDS

5-1. Sub Power / Sub Power 2 PC Boards

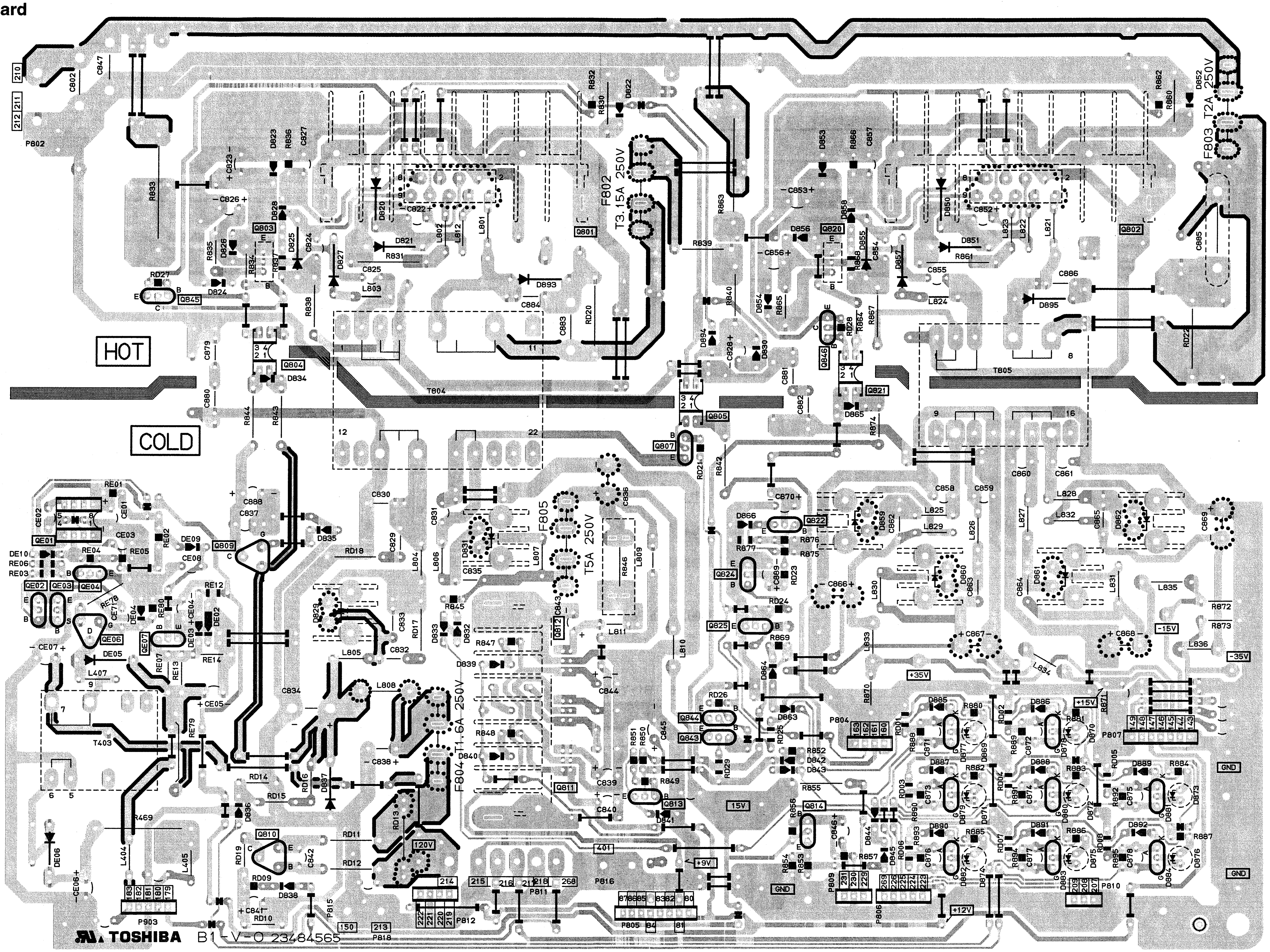

R858
R859
C806
C883
RD45
D801
C885
C884
C886
CD12
T802
COLD
P890
CD01
C887
C889
C888
232
HOT
T801
233
P808
C801
228
227
P862
212
P803
210
R821
R822
R823
RD43
R817
R824
CD10
D803
CD11
L858
L859
L860
L861
R810
C807
C808
C810
C811
R811
R804
R805
R803
CD03
RD44
D806
R812
Q842
C809
R815
R816
R813
R818
R806
T803
RD48
C813
R814
R808
C812
D804
R807
C805
C804
R820
R819
DD10
D802
RD49
D805
Q861
C803
D808
D807
D810
D809
DD04
DD03
DD01
DD02
CD04
CD05
Q860
CD09
Q841
L857
L856
Q869
RD34
DD08
Q865
RD38
RD42
CD06
Q870
L851
Q866
L850
RD35
DD09
RD46
Q862
DD05
RD31
RD39
CD13
Q871
L853
L852
Q867
Q863
RD36
RD40
CD07
RD32
DD06
CD08
Q872
L855
L854
RD41
RD37
DD07
Q864
RD33
Q868
TOSHIBA B1-V-0
23484688

U002 Sub Power PC Board


TOSHIBA 23484861 B1-V-0
P895
F810 T4A250V
228
CD16
T810
CAUTION
LIVE AREA
RD53
RD52
CD15
RD51
405
227
P894
P893
406
RD50
RD56
Q873
RD55
DD12
P840
S801
DD13
RD54

U008 Sub Power 2 PC Board

5-2. Power PC Board


HOT
COLD
F802 T3.15A 250V
F803 T2A 250V
F805 T5A 250V
F804 T1.6A 250V
T804
T805
T403
P802
P903
P804
P805
P806
P807
P809
P810
P811
P812
P815
P816
P818
+35V
-35V
+15V
-15V
15V
+12V
+9V
120V
GND
TOSHIBA
B1-V-0 23484565

U001 Power PC Board

EXPLODED VIEW AND PARTS LIST

SAFETY PRECAUTION

The parts identified by ⚠ mark are critical for safety. Replace only with part number specified.

The mounting position of replacement is to be identical with originals.

The substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

NOTICE

The part number must be used when ordering parts in order to assist in processing, be sure to include the model number and description.

ABBREVIATIONS

1. **Integrated Circuit (IC)**
2. **Capacitor (Cap)**
   - **Capacitance Tolerance (for Nominal Capacitance more than 10pF)**

Symbol	B	C	D	F	G	J	K	M	N
Tolerance %	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10	± 20	± 30

Symbol	P	Q	T	U	V	W	X	Y	Z
Tolerance %	+ 100 0	+ 30 – 10	+ 50 – 10	+ 75 – 10	+ 20 – 10	+ 100 – 10	+ 40 – 20	+ 150 – 10	+ 80 – 20

Ex. 10μF J = 10μF ± 5%

   - **Capacitance Tolerance (for Nominal Capacitance 10pF or less)**

Symbol	B	C	D	F	G
Tolerance pF	± 0.1	± 0.25	± 0.5	± 1	± 2

Ex. 10pF G = 10pF ± 2pF

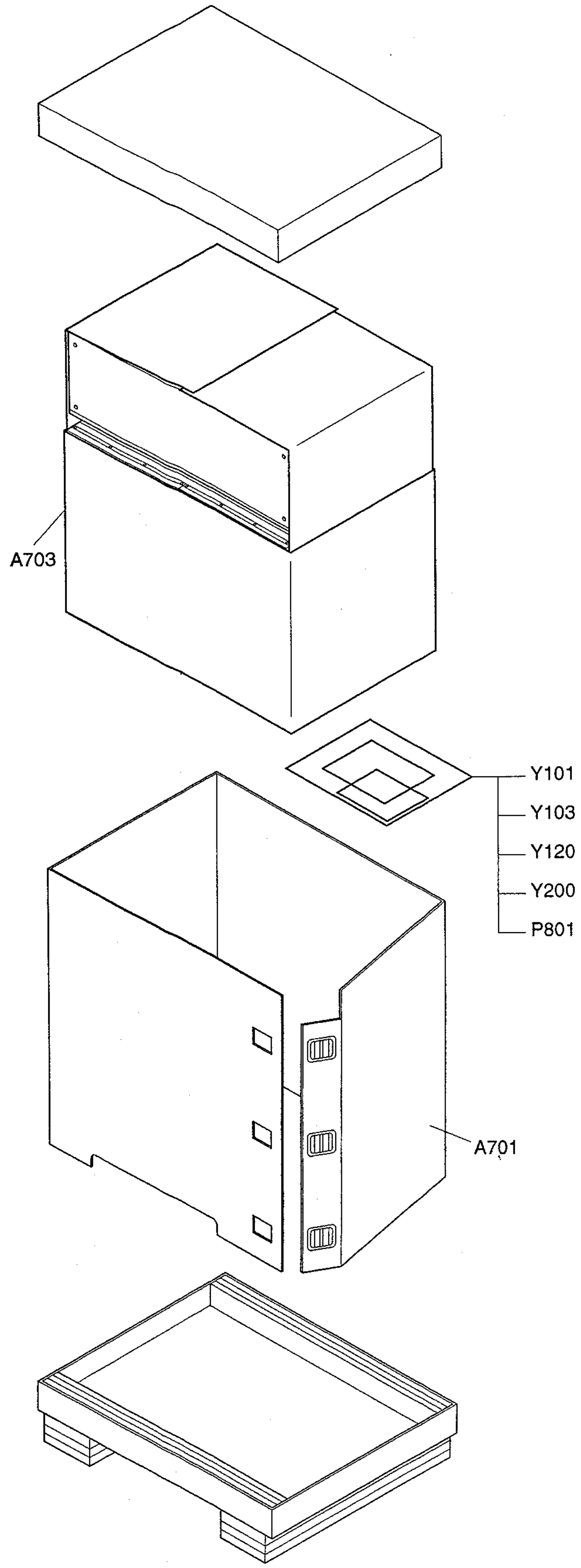
3. **Resistor (Res)**
   - **Resistance tolerance**

Symbol	B	C	D	F	G	J	K	M
Tolerance %	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10	± 20

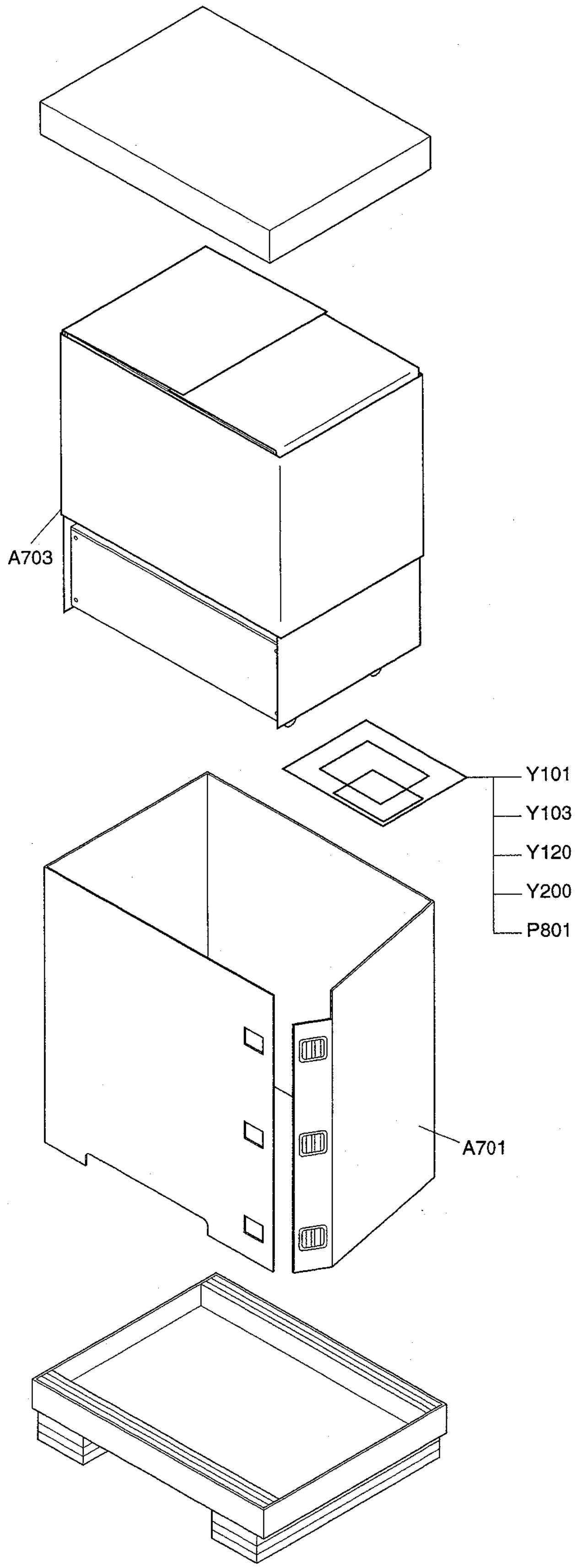
Ex. 470 Ω J = 470Ω ± 5%

4. PACKING ASSEMBLY

< P5031E >


A703
Y101
Y103
Y120
Y200
P801
A701

< P5032E >


A703
Y101
Y103
Y120
Y200
P801
A701

5. CABINET ASSEMBLY

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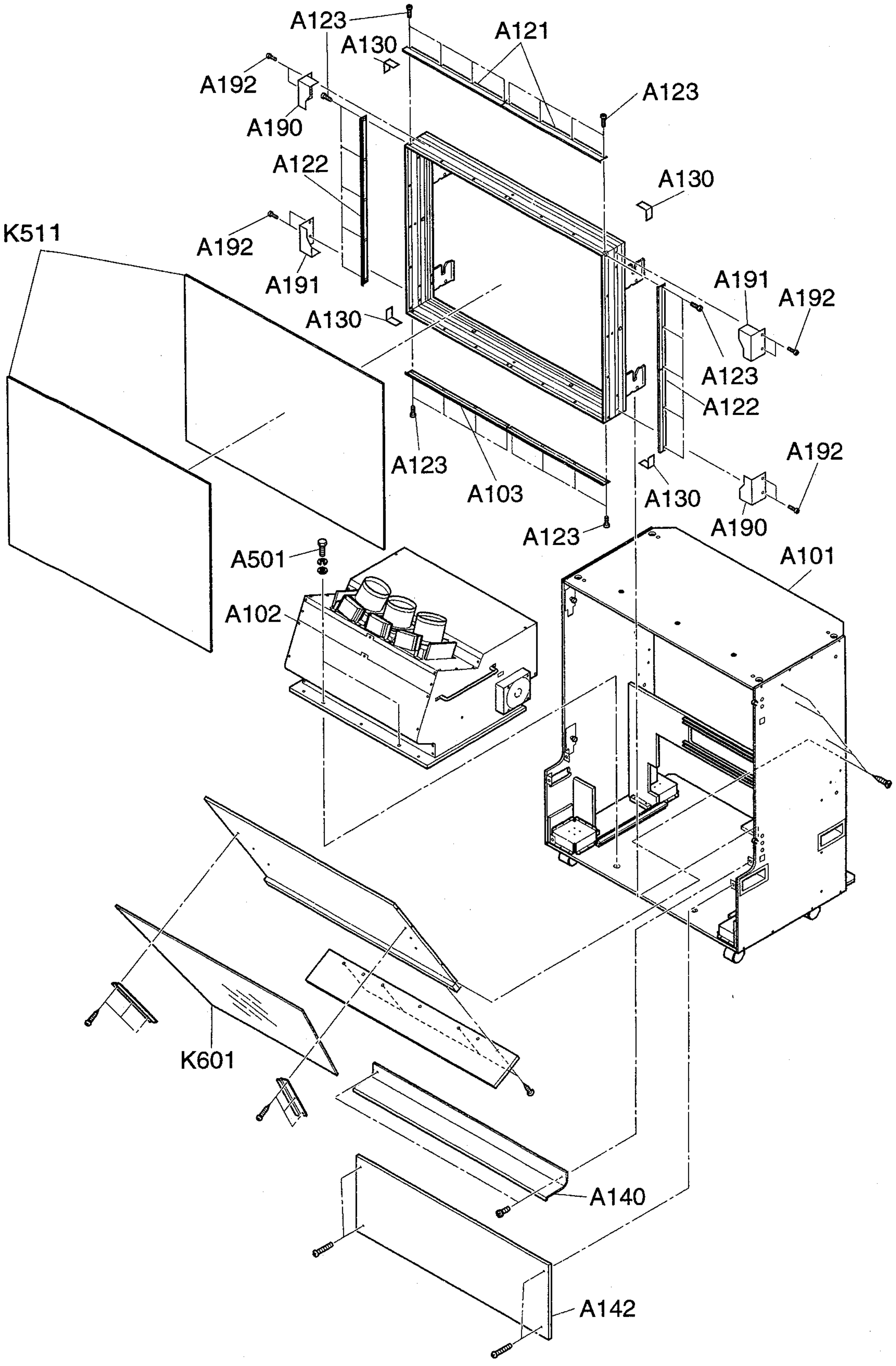
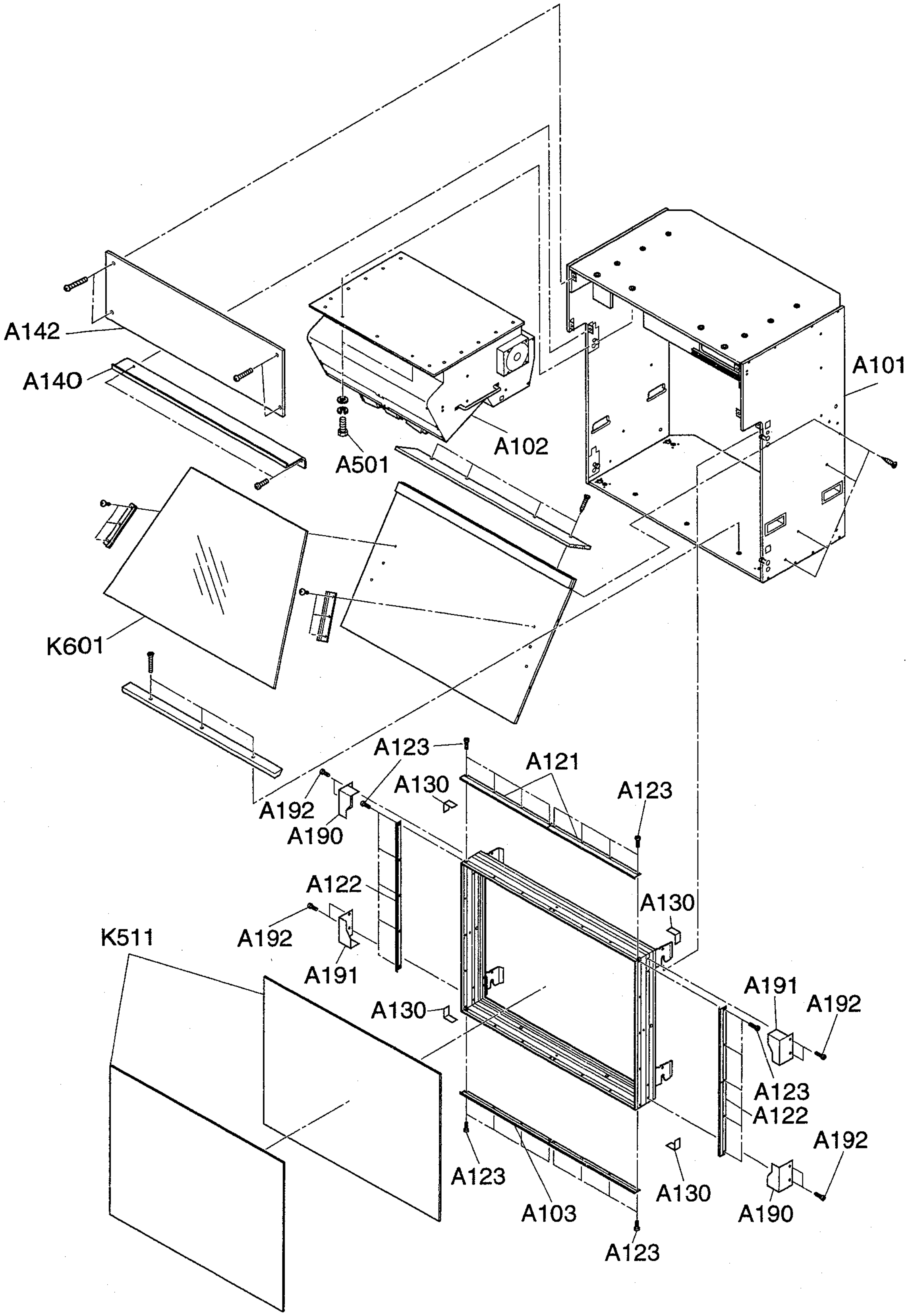
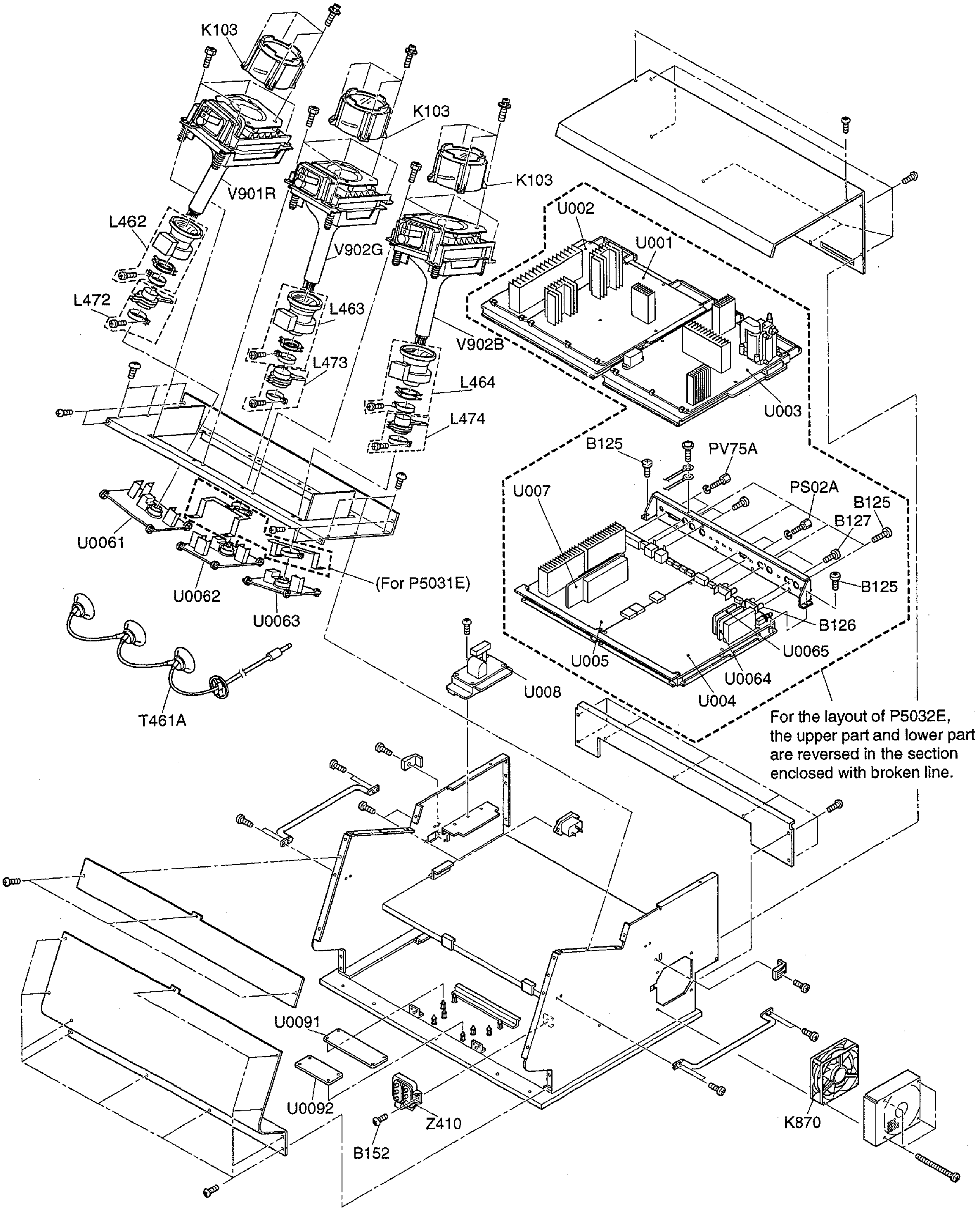

A123
A130
A121
A192
A190
A123
A122
A130
K511
A192
A191
A130
A191
A192
A123
A122
A192
A123
A103
A130
A190
A123
A501
A101
A102
K601
A140
A142

< P5032E >


A142
A140
A501
A102
A101
K601
A123
A121
A130
A123
A192
A190
A122
A130
A192
K511
A191
A130
A191
A192
A123
A122
A192
A123
A103
A130
A190
A123

6. INNER UNIT


K103
K103
K103
V901R
V902G
V902B
L462
L472
L463
L473
L464
L474
U002
U001
U003
B125
PV75A
U007
PS02A
B125
B127
B125
B126
U0065
U005
U0064
U004
U008
U0061
U0062
U0063
(For P5031E)
T461A
U0091
U0092
Z410
B152
K870

For the layout of P5032E, the upper part and lower part are reversed in the section enclosed with broken line.

7. PARTS LIST

- MECHANICAL PARTS -

LOCATION NUMBER	PART NUMBER	DESCRIPTION	
A101	23800611	Wood Cabinet	
A102	23800613	Metal Box(P5031E)	
A102	23800614	Metal Box(P5032E)	
A103	23476917	Screen Holder(A)	
A121	23476918	Screen Holder(B)	
A122	23476916	Screen Holder(A)	
A123	70391438	Screw	3x6mm
A130	23560569	Tape	
A140	23802043	Front Cover	
A142	23802044	Wood Plate(P5031E)	
A142	23802053	Wood Plate(P5032E)	
A190	23476692	Screen Protector(A)	
A191	23476693	Screen Protector(B)	
A192	23710098	Screw	4x8mm
A501	23730171	Bolt	6BA8x25mm
A701	23525315	Case(P5031E)	
A701	23525316	Case(P5032E)	
A703	23941621	Sheet	
B125	70391440	Screw	3x10mm
B126	23874860	Knob	
B127	70391440	Screw	3x10mm
B152	70391081	Screw	4x12mm
B173	70391081	Screw	4x12mm
E966	23960136	Bond	
E976	23960136	Bond	
E986	23960136	Bond	
K103	23430111	Lens Assy	
K511	23837493	Screen Assy	
K601	23430116	Mirror	
⚠K870	23125466	Fan	D13M1202A, DC12V
⚠L462	23231127	Deflection Yoke	TDY7079S
⚠L463	23231128	Deflection Yoke	TDY7079S
⚠L464	23231129	Deflection Yoke	TDY7079S
L472	23102445	Coil, Focus	MAG-1096
L473	23102445	Coil, Focus	MAG-1096
L474	23102445	Coil, Focus	MAG-1096
⚠P801	23372019	Power Cord	250V
⚠P885	70163080	AC Inlet	ZUG2210-11A
PS02A	23730899	Screw	
PV75A	23730899	Screw	
⚠T461A	23192900	Anode Cap	TCCP5144
⚠V901R	23795014	Coupling CRT(Red)(P5031E)	
⚠V901R	23795109	Coupling CRT(Red)(P5032E)	
⚠V902G	23795015	Coupling CRT(Green)(P5031E)	
⚠V902G	23795110	Coupling CRT(Green)(P5032E)	
⚠V903B	23795016	Coupling CRT(Blue)(P5031E)	
⚠V903B	23795111	Coupling CRT(Blue)(P5032E)	
Y101	23552624	Owners Manual	English
Y103	23368644	Cable	5P, L3000
Y120	23943846	Cover	
Y200	23948685	Accessory For Assembling	
⚠Z410	23110834	Focus Pack	TPA6026

LOCATION NUMBER	PART NUMBER	DESCRIPTION

LOCATION NUMBER	PART NUMBER	DESCRIPTION	
		- ELECTRICAL PARTS -	
■U001	23704315	PC Board Assy	Power
		- INTEGRATED CIRCUITS -	
⚠Q801	23904247	IC	STR-S6708
⚠Q802	23904247	IC	STR-S6708
⚠Q809	A6907752	IC	S1854
⚠Q811	23905815	IC	UPC2412AHF
⚠Q812	B0372900	IC	TA78009AP
QE01	B0347450	IC	TA7555P
		- TRANSISTORS -	
Q803	23314141	Transistor	2SC3852
⚠Q804	A8643112	Transistor	TLP621
⚠Q805	A8643112	Transistor	TLP621
Q807	A6317440	Transistor	2SC1815-Y
Q810	A6532853	Transistor	2SA949-Y
Q813	A6317440	Transistor	2SC1815-Y
Q814	A6317440	Transistor	2SC1815-Y
Q820	23314141	Transistor	2SC3852
⚠Q821	A8643112	Transistor	TLP621
Q822	A6317440	Transistor	2SC1815-Y
Q824	A6333346	Transistor	2SC2655-Y
Q825	A6317440	Transistor	2SC1815-Y
Q843	A6317440	Transistor	2SC1815-Y
Q844	A6317440	Transistor	2SC1815-Y
Q845	A6317440	Transistor	2SC1815-Y
Q846	A6317440	Transistor	2SC1815-Y
QE02	A6317440	Transistor	2SC1815-Y
QE03	A6534053	Transistor	2SA1015-Y
QE04	A6734590	Transistor	2SC752(G)
QE06	A6061550	Transistor	2SK530
QE07	A6356460	Transistor	2SC3112-B
		- DIODES -	
D820	23118094	Diode	EU2A
D821	23118094	Diode	EU2A
D822	23316309	Diode, Zener	UZ5.6BSB
D823	23316339	Diode, Zener	UZ15BSB
D824	23316315	Diode, Zener	UZ6.8BSB
D825	23118094	Diode	EU2A
D826	A7150351	Diode	1SS178(FA)
D827	23118094	Diode	EU2A
D828	A7150258	Diode	1SS176FA
⚠D829	23316406	Diode	FML-G16S
D830	23316292	Diode, Zener	UZ3.3BSA
⚠D831	23316184	Diode	FML-G12S
D832	23316351	Diode, Zener	UZ22BSB
D833	A7150351	Diode	1SS178(FA)
D834	A7150258	Diode	1SS176FA
⚠D835	23316306	Diode, Zener	UZ5.1BSB
D836	23316370	Diode, Zener	UZ36BSA
D837	23118339	Diode, Zener	R2M
D838	23316370	Diode, Zener	UZ36BSA
D839	A7150258	Diode	1SS176FA
D840	A7150258	Diode	1SS176FA
D841	23316317	Diode, Zener	UZ7.5BSA
D842	23316327	Diode, Zener	UZ10BSB
D843	A7150258	Diode	1SS176FA
D844	23316302	Diode, Zener	UZ4.7BSB
D845	A7150258	Diode	1SS176FA
D850	23118094	Diode	EU2A
D851	23118094	Diode	EU2A
D852	23316309	Diode, Zener	UZ5.6BSB
D853	23316339	Diode, Zener	UZ15BSB
D854	23316315	Diode, Zener	UZ6.8BSB
D855	23118094	Diode	EU2A
D856	A7150351	Diode	1SS178(FA)
D857	23118094	Diode	EU2A
D858	A7150258	Diode	1SS176FA
⚠D859	23316406	Diode	FML-G16S
⚠D860	23316406	Diode	FML-G16S
⚠D861	23316406	Diode	FML-G16S
⚠D862	23316406	Diode	FML-G16S
D863	23316321	Diode, Zener	UZ8.2BSB

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
D864	23316374	Diode, Zener	UZ39BSA	
D865	A7150258	Diode	1SS176FA	
D866	23316312	Diode, Zener	UZ6.2BSB	
D869	A8605702	Diode, LED	TLG114A	
D870	A8605702	Diode, LED	TLG114A	
D871	A8605702	Diode, LED	TLG114A	
D872	A8605702	Diode, LED	TLG114A	
D873	A8605702	Diode, LED	TLG114A	
D874	A8605702	Diode, LED	TLG114A	
D875	A8605702	Diode, LED	TLG114A	
D876	A8605702	Diode, LED	TLG114A	
D877	A7801205	Diode	SF0R3G42	
D878	A7801205	Diode	SF0R3G42	
D879	A7801205	Diode	SF0R3G42	
D880	A7801205	Diode	SF0R3G42	
D881	A7801205	Diode	SF0R3G42	
D882	A7801205	Diode	SF0R3G42	
D883	A7801205	Diode	SF0R3G42	
D884	A7801205	Diode	SF0R3G42	
D885	A7150258	Diode	1SS176FA	
D886	A7150258	Diode	1SS176FA	
D887	A7150258	Diode	1SS176FA	
D888	A7150258	Diode	1SS176FA	
D889	A7150258	Diode	1SS176FA	
D890	A7150258	Diode	1SS176FA	
D891	A7150258	Diode	1SS176FA	
D892	A7150258	Diode	1SS176FA	
D893	23316381	Diode	RU1P	
D894	A7150258	Diode	1SS176FA	
D895	23316381	Diode	RU1P	
DE02	23115774	Diode, Zener	RD6.2E	
DE03	A7150258	Diode	1SS176FA	
DE04	23118499	Diode, Zener	RD18ESA	
DE05	23316400	Diode	RG2A	
DE06	23118096	Diode	RK34	
DE09	A7150258	Diode	1SS176FA	
DE10	A7150258	Diode	1SS176FA	
		- COILS -		
L404	23103880	Coil, Choke	TEM2011Y	
L405	23103880	Coil, Choke	TEM2011Y	
L407	23103880	Coil, Choke	TEM2011Y	
L801	23103880	Coil, Choke	TEM2011Y	
L802	23103880	Coil, Choke	TEM2011Y	
L803	23103880	Coil, Choke	TEM2011Y	
L804	23103880	Coil, Choke	TEM2011Y	
L805	23103880	Coil, Choke	TEM2011Y	
L806	23103880	Coil, Choke	TEM2011Y	
L807	23103880	Coil, Choke	TEM2011Y	
L808	23221970	Coil, Choke	TLN3009	
L809	23221746	Coil, Choke	TLN3155D	
L810	23221746	Coil, Choke	TLN3155D	
L811	23221746	Coil, Choke	TLN3155D	
L812	23103880	Coil, Choke	TEM2011Y	
L821	23103880	Coil, Choke	TEM2011Y	
L822	23103880	Coil, Choke	TEM2011Y	
L823	23103880	Coil, Choke	TEM2011Y	
L824	23103880	Coil, Choke	TEM2011Y	
L825	23103880	Coil, Choke	TEM2011Y	
L826	23103880	Coil, Choke	TEM2011Y	
L827	23103880	Coil, Choke	TEM2011Y	
L828	23103880	Coil, Choke	TEM2011Y	
L829	23103880	Coil, Choke	TEM2011Y	
L830	23103880	Coil, Choke	TEM2011Y	
L831	23103880	Coil, Choke	TEM2011Y	
L832	23103880	Coil, Choke	TEM2011Y	
L833	23221746	Coil, Choke	TLN3155D	
L834	23221961	Coil, Choke	TLN3017	
L835	23221970	Coil, Choke	TLN3009	
L836	23221746	Coil, Choke	TLN3155D	
		- CAPACITORS -		
C802	24095820	Cap, Plastic	0.01μF	M 630V
C822	24667101	Cap, Electrolytic	100μF	M 25V
C823	24669331	Cap, Electrolytic	330μF	M 50V
C824	24214471	Cap, Ceramic	470pF	K 500V
C825	24214471	Cap, Ceramic	470pF	K 500V

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
C826	24676220	Cap,Electrolytic	22μF	M 100V
C827	24590152	Cap,Plastic	1500pF	J 50V
C828	24797470	Cap,Electrolytic	47μF	M 50V
C829	24092337	Cap,Ceramic	220pF	K 2kV
C830	24092341	Cap,Ceramic	470pF	K 2kV
C831	24214331	Cap,Ceramic	330pF	K 500V
C832	24092338	Cap,Ceramic	270pF	K 2kV
C833	24092341	Cap,Ceramic	470pF	K 2kV
C834	24086859	Cap,Electrolytic	470μF	M 200V
C835	24214331	Cap,Ceramic	330pF	K 500V
C836	24617044	Cap,Electrolytic	2200μF	M 35V
C837	24095680	Cap,Plastic	0.1μF	J 200V
C838	24677101	Cap,Electrolytic	100μF	M 160V
C839	24667101	Cap,Electrolytic	100μF	M 25V
C840	24666101	Cap,Electrolytic	100μF	M 16V
C841	24669470	Cap,Electrolytic	47μF	M 50V
C842	24538474	Cap,Plastic	0.47μF	J 50V
C843	24667101	Cap,Electrolytic	100μF	M 25V
C844	24666101	Cap,Electrolytic	100μF	M 16V
C845	24669471	Cap,Electrolytic	470μF	M 50V
C846	24666471	Cap,Electrolytic	470μF	M 16V
C847	24095820	Cap,Plastic	0.01μF	M 630V
C848	24095820	Cap,Plastic	0.01μF	M 630V
C849	24095820	Cap,Plastic	0.01μF	M 630V
C852	24667101	Cap,Electrolytic	100μF	M 25V
C853	24669331	Cap,Electrolytic	330μF	M 50V
C854	24214471	Cap,Ceramic	470pF	K 500V
C855	24214471	Cap,Ceramic	470pF	K 500V
C856	24676220	Cap,Electrolytic	22μF	M 100V
C857	24590272	Cap,Plastic	2700pF	J 50V
C858	24214331	Cap,Ceramic	330pF	K 500V
C859	24214331	Cap,Ceramic	330pF	K 500V
C860	24214331	Cap,Ceramic	330pF	K 500V
C861	24214331	Cap,Ceramic	330pF	K 500V
C862	24092344	Cap,Ceramic	820pF	K 2kV
C863	24092344	Cap,Ceramic	820pF	K 2kV
C864	24092344	Cap,Ceramic	820pF	K 2kV
C865	24092344	Cap,Ceramic	820pF	K 2kV
C866	24669222	Cap,Electrolytic	2200μF	M 50V
C867	24617044	Cap,Electrolytic	2200μF	M 35V
C868	24669222	Cap,Electrolytic	2200μF	M 50V
C869	24669222	Cap,Electrolytic	2200μF	M 50V
C870	24669339	Cap,Electrolytic	3.3μF	M 50V
C871	24591104	Cap,Plastic	0.1μF	J 50V
C872	24591104	Cap,Plastic	0.1μF	J 50V
C873	24591104	Cap,Plastic	0.1μF	J 50V
C874	24591104	Cap,Plastic	0.1μF	J 50V
C875	24591224	Cap,Plastic	0.22μF	J 50V
C876	24591104	Cap,Plastic	0.1μF	J 50V
C877	24591104	Cap,Plastic	0.1μF	J 50V
C878	24591104	Cap,Plastic	0.1μF	J 50V
⚠C879	24094837	Cap,Ceramic	3300pF	M AC400
⚠C880	24094837	Cap,Ceramic	3300pF	M AC400
⚠C881	24094820	Cap,Ceramic	2200pF	M AC400
⚠C882	24094820	Cap,Ceramic	2200pF	M AC400
C883	24095820	Cap,Plastic	0.01μF	M 630V
C884	24092345	Cap,Ceramic	1000pF	K 2kV
C885	24095779	Cap,Plastic	0.62μF	J 400V
C886	24092345	Cap,Ceramic	1000pF	K 2kV
C888	24677339	Cap,Electrolytic	3.3μF	M 160V
C889	24666331	Cap,Electrolytic	330μF	M 16V
CE01	24666470	Cap,Electrolytic	47μF	M 16V
CE02	24232103	Cap,Ceramic	0.01μF	Z 50V
CE03	24598331	Cap,Plastic	330pF	J 50V
CE04	24666100	Cap,Electrolytic	10μF	M 16V
CE05	24679330	Cap,Electrolytic	33μF	M 250V
CE06	24666222	Cap,Electrolytic	2200μF	M 16V
CE07	24677470	Cap,Electrolytic	47μF	M 160V
CE08	24591473	Cap,Plastic	0.047μF	J 50V
CE71	24591103	Cap,Plastic	0.01μF	J 50V
		- RESISTORS -		
⚠R469	24000921	Res,Fusible	1.2Ω	J 2W
R830	24322278	Res,Metal	0.27Ω	J 1W
R831	24383100	Res,Oxide Metal	10Ω	J 2W
R832	24366101	Res,Carbon	100Ω	J 1/6W
R833	24384104	Res,Oxide Metal	100kΩ	J 3W
R834	24552511	Res,Oxide Metal	510Ω	J 1/2W
R835	24552103	Res,Oxide Metal	10kΩ	J 1/2W
R836	24366222	Res,Carbon	2.2kΩ	J 1/6W
R837	24366332	Res,Carbon	3.3kΩ	J 1/6W
R838	24321568	Res,Oxide Metal	0.56Ω	J 1/2W
R839	24554393	Res,Oxide Metal	3.9kΩ	J 2W
R840	24554393	Res,Oxide Metal	3.9kΩ	J 2W
R842	24381102	Res,Oxide Metal	1kΩ	J 1/2W
⚠R843	24553123	Res,Oxide Metal	12kΩ	J 1W
R844	24553103	Res,Oxide Metal	10kΩ	J 1W
R845	24366242	Res,Carbon	2.4kΩ	J 1/6W
⚠R846	24510569	Res,Cement	5.6Ω	J 5W
R847	24366202	Res,Carbon	2kΩ	J 1/6W
R848	24366202	Res,Carbon	2kΩ	J 1/6W
R849	24366104	Res,Carbon	100kΩ	J 1/6W
R850	24366203	Res,Carbon	20kΩ	J 1/6W
R851	24366273	Res,Carbon	27kΩ	J 1/6W
R852	24366102	Res,Carbon	1kΩ	J 1/6W
R853	24366821	Res,Carbon	820Ω	J 1/6W
R854	24366103	Res,Carbon	10kΩ	J 1/6W
R855	24554130	Res,Oxide Metal	13Ω	J 2W
R856	24366153	Res,Carbon	15kΩ	J 1/6W
R857	24366201	Res,Carbon	200Ω	J 1/6W
R860	24322688	Res,Metal	0.68Ω	J 1W
R861	24383100	Res,Oxide Metal	10Ω	J 2W
R862	24366101	Res,Carbon	100Ω	J 1/6W
R863	24384104	Res,Oxide Metal	100kΩ	J 3W
R864	24552511	Res,Oxide Metal	510Ω	J 1/2W
R865	24552103	Res,Oxide Metal	10kΩ	J 1/2W
R866	24366122	Res,Carbon	1.2kΩ	J 1/6W
R867	24321568	Res,Oxide Metal	0.56Ω	J 1/2W
R868	24366272	Res,Carbon	2.7kΩ	J 1/6W
R869	24366272	Res,Carbon	2.7kΩ	J 1/6W
R870	24552472	Res,Oxide Metal	4700Ω	J 1/2W
R871	24552472	Res,Oxide Metal	4700Ω	J 1/2W
R872	24552472	Res,Oxide Metal	4700Ω	J 1/2W
R873	24552472	Res,Oxide Metal	4700Ω	J 1/2W
R874	24552202	Res,Oxide Metal	2kΩ	J 1/2W
R875	24366432	Res,Carbon	4.3kΩ	J 1/6W
R876	24366392	Res,Carbon	3.9kΩ	J 1/6W
R877	24366243	Res,Carbon	24kΩ	J 1/6W
R880	24366681	Res,Carbon	680Ω	J 1/6W
R881	24366681	Res,Carbon	680Ω	J 1/6W
R882	24366681	Res,Carbon	680Ω	J 1/6W
R883	24366681	Res,Carbon	680Ω	J 1/6W
R884	24366681	Res,Carbon	680Ω	J 1/6W
R885	24366681	Res,Carbon	680Ω	J 1/6W
R886	24366681	Res,Carbon	680Ω	J 1/6W
R887	24366681	Res,Carbon	680Ω	J 1/6W
R888	24366102	Res,Carbon	1kΩ	J 1/6W
R889	24366102	Res,Carbon	1kΩ	J 1/6W
R890	24366102	Res,Carbon	1kΩ	J 1/6W
R891	24366102	Res,Carbon	1kΩ	J 1/6W
R892	24366102	Res,Carbon	1kΩ	J 1/6W
R893	24366102	Res,Carbon	1kΩ	J 1/6W
R894	24366102	Res,Carbon	1kΩ	J 1/6W
R895	24366102	Res,Carbon	1kΩ	J 1/6W
RD01	24366471	Res,Carbon	470Ω	J 1/6W
RD02	24366471	Res,Carbon	470Ω	J 1/6W
RD03	24366471	Res,Carbon	470Ω	J 1/6W
RD04	24366471	Res,Carbon	470Ω	J 1/6W
RD05	24366471	Res,Carbon	470Ω	J 1/6W
RD06	24366471	Res,Carbon	470Ω	J 1/6W
RD07	24366471	Res,Carbon	470Ω	J 1/6W
RD08	24366471	Res,Carbon	470Ω	J 1/6W
RD09	24366102	Res,Carbon	1kΩ	J 1/6W
RD10	24327203	Res,Metal	20kΩ	F 1/4W
RD11	24381131	Res,Metal	130Ω	J 1/2W
RD12	24381301	Res,Oxide Metal	300Ω	J 1/2W
⚠RD13	24323518	Res,Metal	0.51Ω	J 2W
RD14	24327912	Res,Metal	9.1kΩ	F 1/4W
RD15	24327123	Res,Metal	12kΩ	F 1/4W
RD16	24327133	Res,Metal	13kΩ	F 1/4W
⚠RD17	24382331	Res,Oxide Metal	330Ω	J 1W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
⚠RD18	24382331	Res, Oxide Metal	330Ω	J 1W
RD19	24327203	Res, Metal	20kΩ	F 1/4W
RD20	24383563	Res, Oxide Metal	56kΩ	J 2W
RD21	24366332	Res, Carbon	3.3kΩ	J 1/6W
RD22	24383563	Res, Oxide Metal	56kΩ	J 2W
RD23	24366362	Res, Carbon	3.6kΩ	J 1/6W
RD24	24366332	Res, Carbon	3.3kΩ	J 1/6W
RD25	24366103	Res, Carbon	10kΩ	J 1/6W
RD26	24366332	Res, Carbon	3.3kΩ	J 1/6W
RD27	24366392	Res, Carbon	3.9kΩ	J 1/6W
RD28	24366391	Res, Carbon	390Ω	J 1/6W
RD29	24366221	Res, Carbon	220Ω	J 1/6W
RE01	24367912	Res, Carbon	9.1kΩ	G 1/6W
RE02	24367223	Res, Carbon	22kΩ	G 1/6W
RE03	24366101	Res, Carbon	100Ω	J 1/6W
RE04	24366682	Res, Carbon	6.8kΩ	J 1/6W
RE05	24366122	Res, Carbon	1.2kΩ	J 1/6W
RE06	24366222	Res, Carbon	2.2kΩ	J 1/6W
RE07	24327394	Res, Metal	390kΩ	F 1/4W
RE12	24366102	Res, Carbon	1kΩ	J 1/6W
RE13	24327394	Res, Metal	390kΩ	F 1/4W
RE14	24327622	Res, Metal	6.2kΩ	F 1/4W
⚠RE78	24321479	Res, Metal	4.7kΩ	J 1/2W
RE79	24383103	Res, Oxide Metal	10kΩ	J 2W
RE80	24366223	Res, Carbon	22kΩ	J 1/6W
		- MISCELLANEOUS -		
C834A	23960136	Bond		
D829B	70391355	Screw	3x8mm	
D831B	70391355	Screw	3x8mm	
D859B	70391355	Screw	3x8mm	
D860B	70391355	Screw	3x8mm	
D861B	70391355	Screw	3x8mm	
D862B	70391355	Screw	3x8mm	
⚠F802	23144868	Fuse, 250V, 3.15A		
F802A	23165433	Fuse Holder		
⚠F803	23144870	Fuse, 250V, 2.0A		
F803A	23165433	Fuse Holder		
⚠F804	23144871	Fuse, 250V, 1.6A		
F804A	23165433	Fuse Holder		
⚠F805	23144458	Fuse	250V, 5.0A	
F805A	23165433	Fuse Holder		
Q801B	72471082	Screw, 3x10mm		
Q802B	72471082	Screw, 3x10mm		
Q811B	70391355	Screw	3x8mm	
Q812B	70391355	Screw	3x8mm	
⚠T403	23217281	Transformer	TPW3326AD	
⚠T804	23217299	Power Transformer	TPW3324BE	
⚠T805	23217300	Power Transformer	TPW3325BE	
■U002	23704316	PC Board Assy	Sub Power	
		- INTEGRATED CIRCUITS -		
Q842	23905006	IC	FA5331P	
Q860	23904846	IC	MCT7815BT	
Q861	23904846	IC	MCT7815BT	
		- TRANSISTORS -		
⚠Q841	A6064350	Transistor	2SK894	
Q862	A6333346	Transistor	2SC2655-Y	
Q863	A6333346	Transistor	2SC2655-Y	
Q864	A6333346	Transistor	2SC2655-Y	
Q865	A6333346	Transistor	2SC2655-Y	
Q866	A6534145	Transistor	2SA1020-Y	
Q867	A6534145	Transistor	2SA1020-Y	
Q868	A6534145	Transistor	2SA1020-Y	
Q869	A6534145	Transistor	2SA1020-Y	
⚠Q870	A6064350	Transistor	2SK894	
⚠Q871	A6064350	Transistor	2SK894	
⚠Q872	A6064350	Transistor	2SK894	
		- DIODES -		
⚠D801	23316693	Diode	RBV-606	
D802	A7568752	Diode	1S1887A	
⚠D803	23316406	Diode	FML-G16S	
D804	23316269	Diode	AK04	
D805	A7150258	Diode	1SS176FA	
D806	23316304	Diode, Zener	UZ4.7BSC	
D807	23118060	Diode	AL01Z	

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
D808	23118060	Diode	AL01Z	
D809	23118060	Diode	AL01Z	
D810	23118060	Diode	AL01Z	
DD01	23118060	Diode	AL01Z	
DD02	23118060	Diode	AL01Z	
DD03	23118060	Diode	AL01Z	
DD04	23118060	Diode	AL01Z	
DD05	A7150258	Diode	1SS176FA	
DD06	A7150258	Diode	1SS176FA	
DD07	A7150258	Diode	1SS176FA	
DD08	A7150258	Diode	1SS176FA	
DD09	23316381	Diode	RU1P	
DD10	23316354	Diode, Zener	UZ24BSA	
		- COILS -		
L850	23103792	Filter	TEM2025Y	
L851	23103880	Coil, Choke	TEM2011Y	
L852	23103792	Filter	TEM2025Y	
L853	23103880	Coil, Choke	TEM2011Y	
L854	23103792	Filter	TEM2025Y	
L855	23103880	Coil, Choke	TEM2011Y	
L856	23103792	Filter	TEM2025Y	
L857	23103880	Coil, Choke	TEM2011Y	
L858	23103880	Coil, Choke	TEM2011Y	
L859	23103880	Coil, Choke	TEM2011Y	
L860	23103880	Coil, Choke	TEM2011Y	
L861	23103880	Coil, Choke	TEM2011Y	
		- CAPACITORS -		
⚠C801	24082318	Cap, Plastic	0.1μF	M 250V
C803	24676101	Cap, Electrolytic	100μF	M 100V
C804	24591104	Cap, Plastic	0.1μF	J 50V
C805	24668100	Cap, Electrolytic	10μF	M 35V
⚠C806	24086043	Cap, Electrolytic	820μF	M 450V
C807	24591473	Cap, Plastic	0.047μF	J 50V
C808	24436331	Cap, Ceramic	330pF	J 50V
C809	24539105	Cap, Plastic	1μF	J 50V
C810	24436181	Cap, Ceramic	180pF	J 50V
C811	24591182	Cap, Plastic	1800pF	J 50V
C812	24591154	Cap, Plastic	0.15μF	J 50V
C813	24669331	Cap, Electrolytic	330μF	M 50V
⚠C883	24092281	Cap, Ceramic	4700pF	M 250V
⚠C884	24092281	Cap, Ceramic	4700pF	M 250V
⚠C885	24092281	Cap, Ceramic	4700pF	M 250V
⚠C886	24092281	Cap, Ceramic	4700pF	M 250V
⚠C887	24094820	Cap, Ceramic	2200pF	M AC400
⚠C888	24094820	Cap, Ceramic	2200pF	M AC400
⚠C889	24082318	Cap, Plastic	0.1μF	M 250V
⚠CD01	24094820	Cap, Ceramic	2200pF	M AC400
CD03	24590471	Cap, Plastic	470pF	J 50V
CD04	24669471	Cap, Electrolytic	470μF	M 50V
CD05	24591104	Cap, Plastic	0.1μF	J 50V
CD06	24668100	Cap, Electrolytic	10μF	M 35V
CD07	24668100	Cap, Electrolytic	10μF	M 35V
CD08	24668100	Cap, Electrolytic	10μF	M 35V
CD09	24668100	Cap, Electrolytic	10μF	M 35V
CD10	24092344	Cap, Ceramic	820pF	K 2kV
CD11	24095820	Cap, Plastic	0.01μF	M 630V
CD12	24095782	Cap, Plastic	0.47μF	J 400V
CD13	24092335	Cap, Ceramic	150pF	K 2kV
		- RESISTORS -		
R803	24367244	Res, Carbon	240kΩ	G 1/6W
R804	24367244	Res, Carbon	240kΩ	G 1/6W
R805	24367242	Res, Carbon	2.4kΩ	G 1/6W
R806	24554123	Res, Oxide Metal	12kΩ	J 2W
R807	24554123	Res, Oxide Metal	12kΩ	J 2W
R808	24366100	Res, Carbon	10Ω	J 1/6W
R810	24367101	Res, Carbon	100Ω	G 1/2W
R811	24366103	Res, Carbon	10kΩ	J 1/6W
R812	24366473	Res, Carbon	47kΩ	J 1/6W
R813	24366684	Res, Carbon	680kΩ	J 1/6W
R814	24366333	Res, Carbon	33kΩ	J 1/6W
R815	24366153	Res, Carbon	15kΩ	J 1/6W
R816	24366820	Res, Carbon	82Ω	J 1/6W
R817	24367184	Res, Carbon	180kΩ	G 1/6W
R818	24367184	Res, Carbon	180kΩ	G 1/6W
R819	24366202	Res, Carbon	2kΩ	J 1/6W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
R820	24066879	Res, Variable	1kΩ	B 0.3W
⚠R821	24327274	Res, Metal	270kΩ	F 1/4W
⚠R822	24327274	Res, Metal	270kΩ	F 1/4W
⚠R823	24327202	Res, Metal	2kΩ	F 1/4W
R824	24367184	Res, Carbon	180kΩ	G 1/6W
⚠R858	24330129	Res, Metal	1.2Ω	J 3W
⚠R859	24330109	Res, Metal	1Ω	J 3W
RD31	24366331	Res, Carbon	330Ω	J 1/6W
RD32	24366331	Res, Carbon	330Ω	J 1/6W
RD33	24366331	Res, Carbon	330Ω	J 1/6W
RD34	24366331	Res, Carbon	330Ω	J 1/6W
RD35	24322208	Res, Metal	0.2Ω	J 1W
RD36	24322208	Res, Metal	0.2Ω	J 1W
RD37	24322208	Res, Metal	0.2Ω	J 1W
RD38	24322208	Res, Metal	0.2Ω	J 1W
RD39	24382102	Res, Oxide Metal	1kΩ	J 1W
RD40	24382102	Res, Oxide Metal	1kΩ	J 1W
RD41	24382102	Res, Oxide Metal	1kΩ	J 1W
RD42	24382102	Res, Oxide Metal	1kΩ	J 1W
⚠RD43	24327121	Res, Metal	120Ω	F 1/4W
RD44	24367124	Res, Carbon	120kΩ	G 1/6W
⚠RD45	24330109	Res, Metal	1Ω	J 3W
RD46	24554162	Res, Oxide Metal	1.6kΩ	J 2W
⚠RD48	24531120	Res, Fusible	12Ω	J 1/2W
RD49	24554123	Res, Oxide Metal	12kΩ	J 2W
		- MISCELLANEOUS -		
D803B	70391355	Screw	3x8mm	
Q841B	23712312	Screw	3x0.5x12mm	
Q841E	A8012290	Insulator	AC229	
Q841F	A8013110	Washer		
Q841H	23056300	Screw		
Q841I	23742030	Nut	3mm	
Q841J	23037312	Screw	3x12mm	
Q870B	23712312	Screw	3x0.5x12mm	
Q870E	A8012290	Insulator	AC229	
Q870F	A8013110	Washer		
Q870H	23056300	Screw		
Q870I	23742030	Nut	3mm	
Q871B	23712312	Screw	3x0.5x12mm	
Q871E	A8012290	Insulator	AC229	
Q871F	A8013110	Washer		
Q871H	23056300	Screw		
Q871I	23742030	Nut	3mm	
Q872B	23712312	Screw	3x0.5x12mm	
Q872E	A8012290	Insulator	AC229	
Q872F	A8013110	Washer		
Q872H	23056300	Screw		
Q872I	23742030	Nut	3mm	
⚠T801	23211666	Line Filter	TRF3197	
⚠T802	23211666	Line Filter	TRF3197	
⚠T803	23248118	Coil, Choke	TLN3397	
■U008	23705126	PC Board Assy	Sub Power2	
		- TRANSISTORS -		
Q873	A6317440	Transistor	2SC1815-Y	
		- DIODES -		
DD12	23316317	Diode, Zener	UZ7.5BSA	
DD13	A7150258	Diode	1SS176FA	
		- CAPACITORS -		
⚠CD15	24082318	Cap, Plastic	0.1μF	M 250V
⚠CD16	24082318	Cap, Plastic	0.1μF	M 250V
		- RESISTORS -		
RD50	24007515	Res, Cement	0.51Ω	K 15W
⚠RD51	24004914	Res, Metal	5.6MΩ	J 1/2W
RD52	24007061	Res, Cement	1.8Ω	G 2W
RD53	24510479	Res, Cement	4.7Ω	J 5W
RD54	24552680	Res, Oxide Metal	68Ω	J 1/2W
RD55	24366472	Res, Carbon	4.7kΩ	J 1/6W
RD56	24366682	Res, Carbon	6.8kΩ	J 1/6W
		- MISCELLANEOUS -		
⚠F810	23144867	Fuse	250V, 4.0A	
F810A	23165433	Fuse Holder		
S801	23146564	Relay	DC12V	
⚠T810	23211666	Line Filter	TRF3197	

LOCATION NUMBER	PART NUMBER	DESCRIPTION

TOSHIBA

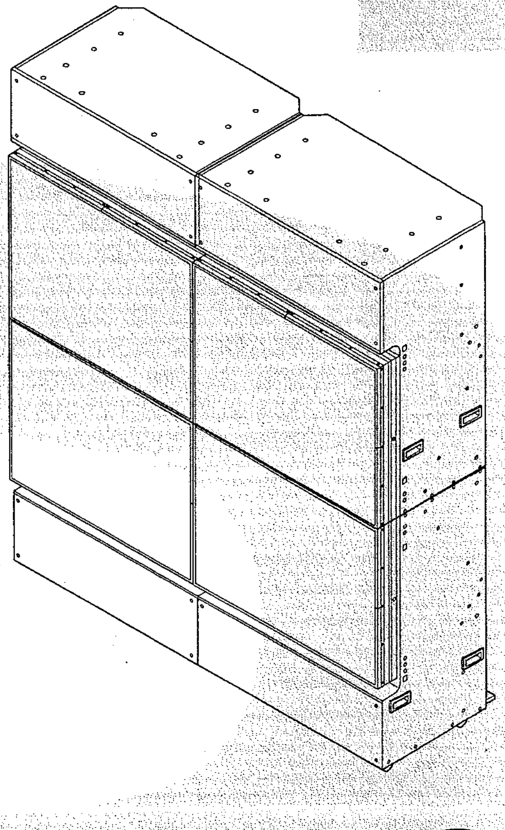
FILE NO. 330-9702

V18496

SERVICE MANUAL

VIDEO WALL PROJECTION UNIT

P5031U
P5032U



PRINTED IN JAPAN, Mar.,1997 ToMo

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this unit is 31.5 kV at zero beam current (minimum brightness) under a 120V AC power source. The high voltage must not, under any circumstances, exceed 32.0 kV.

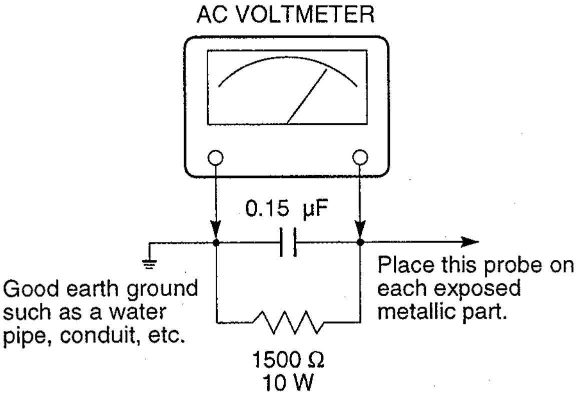
   Each time a unit requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure. It is recommended that the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. This unit is equipped with a Fail Safe (FS) circuit which prevents the unit from producing an excessively high voltage even if the B + voltage increases abnormally. Each time the unit is serviced, the FS circuit must be checked to determine that the circuit is properly functioning, following the FS CIRCUIT CHECK procedure.
3. The only source of X-RAY RADIATION in this unit is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
4. Some part in this unit have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

WARNING: Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.
4. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 Ω per volt or more sensitivity in the following manner:

Connect a 1500 Ω 10 W resistor, paralleled by a 0.15 µF, AC type capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 Ω resistor and 0.15 µF capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 5.25 V(rms). This corresponds to 3.5 mA(AC). Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.


AC VOLTMETER
0.15 µF
Good earth ground such as a water pipe, conduit, etc.
Place this probe on each exposed metallic part.
1500 Ω
10 W

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

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SECTION 1
GENERAL DESCRIPTIONS

1. DIMENSIONS

1-1. P5031U

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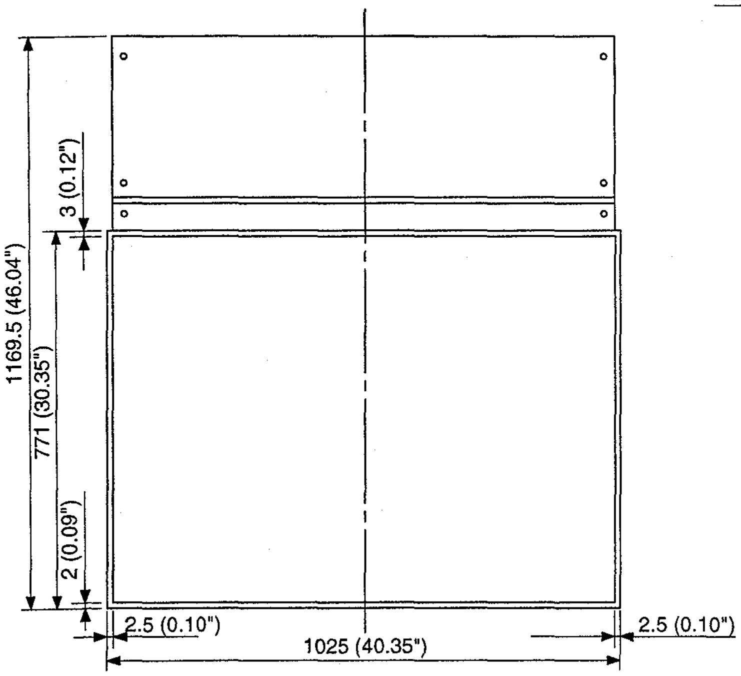
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771 (30.35")
3 (0.12")
2 (0.09")
2.5 (0.10")
1025 (40.35")
2.5 (0.10")

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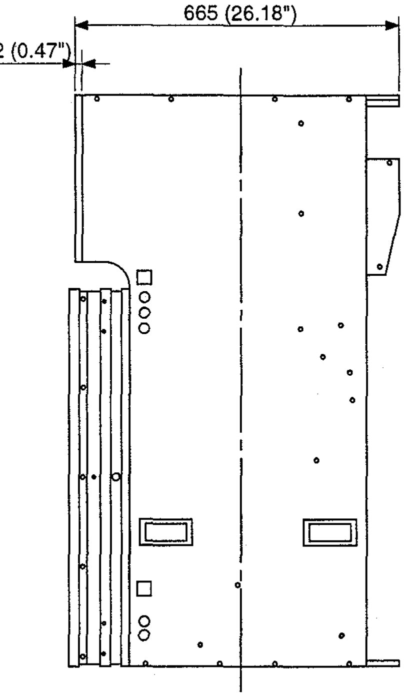
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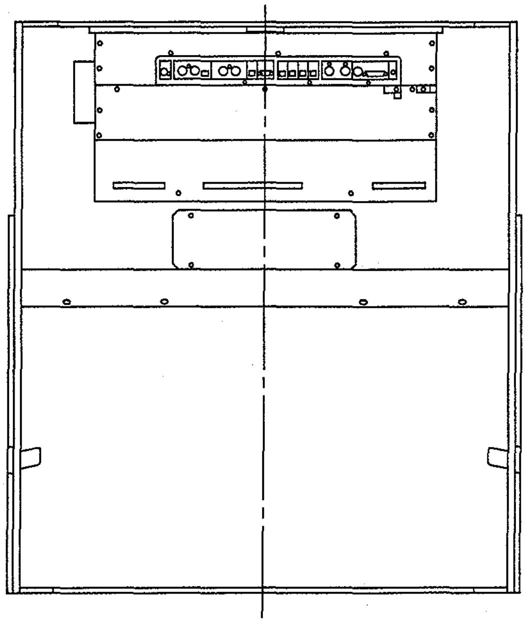

1-2. P5032U

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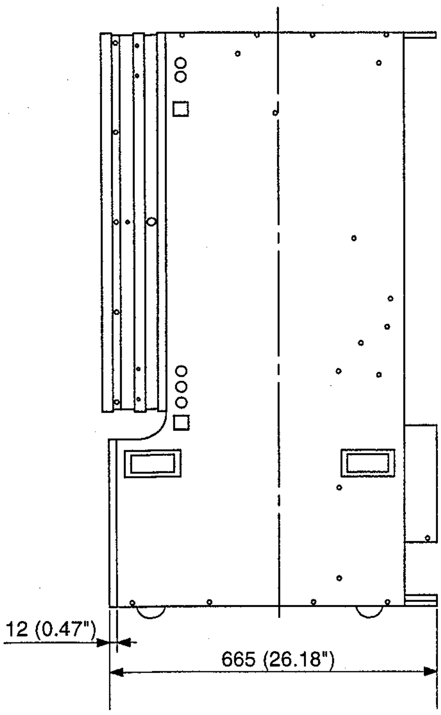
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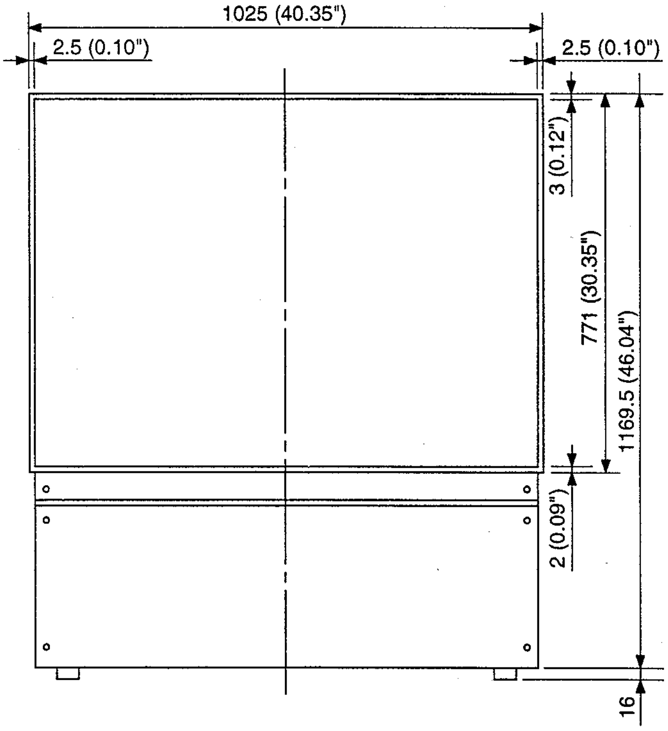
1025 (40.35")
2.5 (0.10")
2.5 (0.10")
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1169.5 (46.04")
2 (0.09")
16

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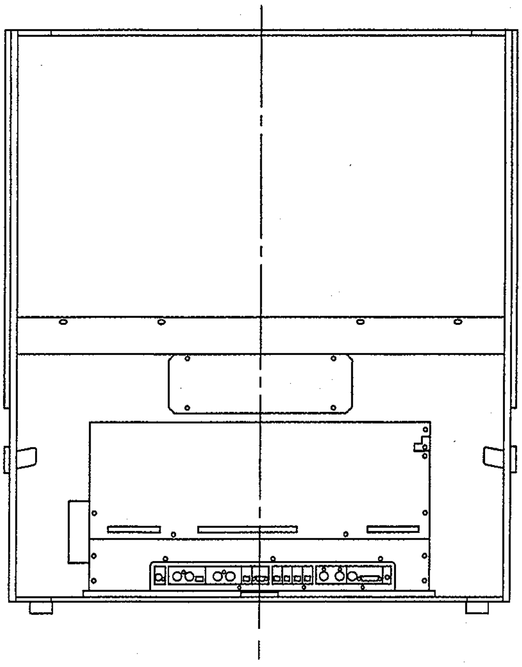
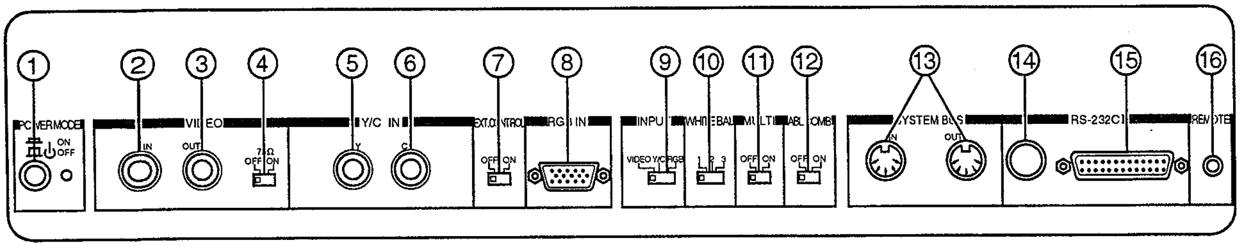


2. IDENTIFICATION OF CONTROLS

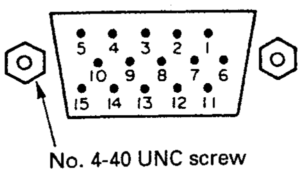
2-1. Control Panel



No.	Name	Function	Type
①	POWER MODE switch	Used for switching power Electric power is consumed even when this switch is OFF.	⏏ ON, ◻⏻ OFF
②	VIDEO input terminal	Used for inputting a VIDEO signal	BNC terminal
③	VIDEO output terminal	Used for through-output of the VIDEO signal input from terminal ②	BNC terminal
④	Termination switch	Used to terminate VIDEO input terminal ② in 75 ohms	ON/OFF
⑤	Y input terminal	Used for inputting luminance (Y) signal	BNC terminal
⑥	C input terminal	Used for inputting chrominance (C) signal	BNC terminal
⑦	EXT. CONTROL switch	Used for switching functions of various control signals for RGB input	ON/OFF
⑧	RGB input terminal	Used for inputting RGB signal	D SUB 15-pin male
⑨	Input select switch	Used to select VIDEO, Y/C, RGB signal as input	VIDEO, Y/C, RGB
⑩	Color temperature switch	Used to select color temperature	1 or 2 or 3
⑪	Multi switch	Set to ON when using multiple projection units.	ON/OFF
⑫	Combination switch	Set to ON when using multiple projection units.	ON/OFF
⑬	System bus terminal	Terminal for starting combination function	DIN 5-pin
⑭	Speed switch	Used to set transmission rate for RS-232C	1,200/2,400/ 4,800/9,600 baud
⑮	RS-232C port	Connector used for RS-232C communication	D SUB 25-pin female
⑯	Remote control terminal	Connector used for remote control unit	ø 3.5mm terminal

- For details concerning control using the RS-232C port, please contact your Authorized Toshiba Dealer.
- Turn ON this switch when using TOSHIBA TMP-100U video processor. (⑦)

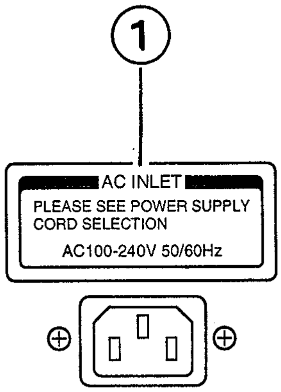
RGB input terminal



ANALOG RGB: 0.7V(p-p) at 75 Ω
C.SYNC : 0.3V(p-p) at 75 Ω
Connector : 15-pin D SUB connector (female)
Pin assignment

1: R	4: CONTROL	7: GND	10: GND	13: Spare
2: G	5: GND	8: GND	11: ABL	14: Spare
3: B	6: GND	9: GND	12: Spare	15: C.SYNC

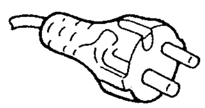
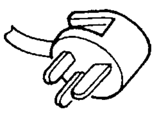
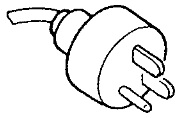
2-2. Power Unit Panel

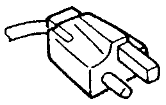
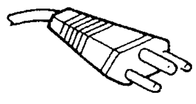

1
AC INLET
PLEASE SEE POWER SUPPLY CORD SELECTION
AC100-240V 50/60Hz

No.	Name	Function	Type
①	AC inlet	AC 100~240V, 50/60Hz	3P plug

POWER SUPPLY CORD SELECTION

If your line voltage is 220 to 240V, use one of the following types of cable.
(For 220V to 240V)

Plug Configuration	Plug Type	Line Voltage Selector Setting
	EURO 240V 10~15A	220~240V
	UK 240V 6A	200~240V
	Australian 240V 10A	200~240V

Plug Configuration	Plug Type	Line Voltage Selector Setting
	North American 240V 15A	200~240V
	Switzerland 240V 6A	200~240V

3. DESCRIPTION OF OPTICAL SYSTEM

3-1. Main Components of Neck of Projection Tube

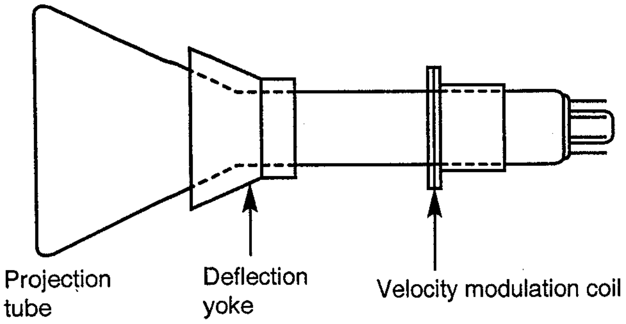


Fig. 3-1-1

3-2. Theory of Operation

For component parts of the neck of the projection tube, the deflection yoke (consisting of main yoke, sub-yoke, centering magnet) and velocity modulation coil are provided.

The main yoke of the deflection yoke is composed of horizontal and vertical deflection yokes that turn light beam horizontally and vertically respectively.

The sub-yoke is called the convergence yoke, which is composed of horizontal and vertical coils. The sub-yoke functions to adjust distortion and coloring of picture with adjusting current supplied from the convergence output circuit.

The centering magnet that is composed of bipolar magnets and installed behind the deflection yoke functions to adjust picture position in the screen.

The velocity modulation coil functions to make the picture clear by modulating deflection velocity.

3-3. Projection Tube

The fluorescent screen is concavely curved with a radius of 350 mm.

This concave gathers light beams in edge portions in the direction of the optical axis for efficient use of the light mount of the projection tube.

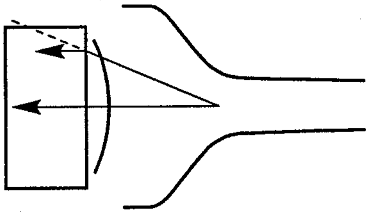


Fig. 3-1-2

Electrostatic focus

Parabolic wavefrom voltage applied to the FOCUS terminal in the horizontal and vertical frequencies periods gets the picture to be in focus uniformly in the center and edge portions of the screen.

The velocity modulation circuit is additionally installed to make the picture clearer.

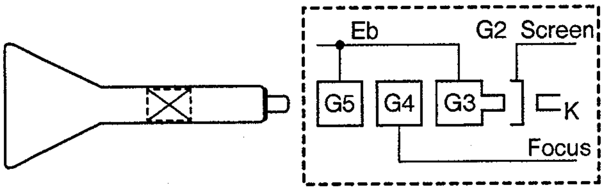


Fig. 3-1-3

4. FUNCTIONS OF MAIN COMPONENTS

4-1. Outline

The optical system is mainly composed of the screen, the mirror, lens and the projection tube.

The distance between the fluorescent screen of the projection tube and the screen is 814.6 mm.

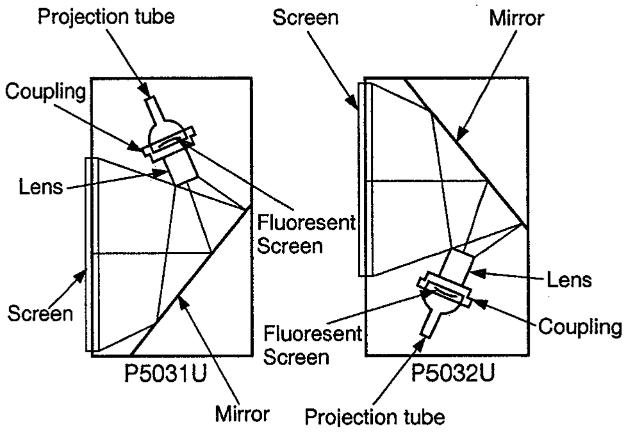

Projection tube
Screen
Mirror
Coupling
Lens
Fluoresent Screen
Screen
P5031U
Mirror
Lens
Coupling
Fluoresent Screen
P5032U
Projection tube

Fig. 4-1-1

4-2. Theory of Operation

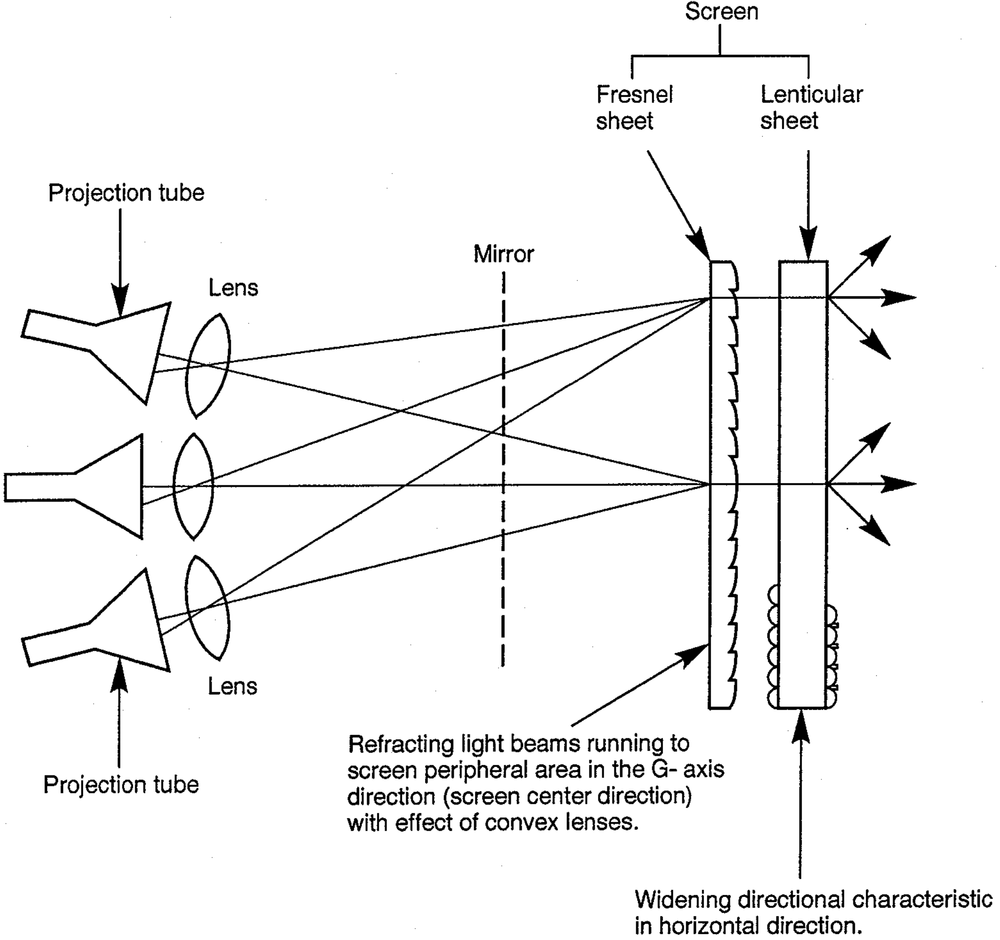

Screen
Fresnel sheet
Lenticular sheet
Projection tube
Lens
Mirror
Lens
Projection tube
Refracting light beams running to screen peripheral area in the G- axis direction (screen center direction) with effect of convex lenses.
Widening directional characteristic in horizontal direction.

Fig. 4-2-1

5. SCREEN

5-1. Effect of Fresnel Sheet

Concaves and convexes that are concentrically arranged on the viewer side of the Fresnel sheet have the same effect as convex lenses, and the uneven surface turns refracted rays nearly in parallel with the normal illuminatin direction to the screen even not only for the center part of the screen but also for the edge portions. This effect results from the focal length of the Fresnel lens so that it is designed to fucus on the emission pupil of the lens.

Moreover, the other side of the Fresnel sheet toward the projection lens has horizontally parallel fine unevenness called the vertical lenticule, which has an effect on vertical expansion of light beam.

In a video projection system that employs one Fresnel sheet, rays in the edge portions of the screen are generally refracted in the direction of the optical axis. However, this projection system refracts rays to be parallel with the optical axis to remove luminance difference from the neighboring screens for other sets since this system uses multiple Fresnel sheets.

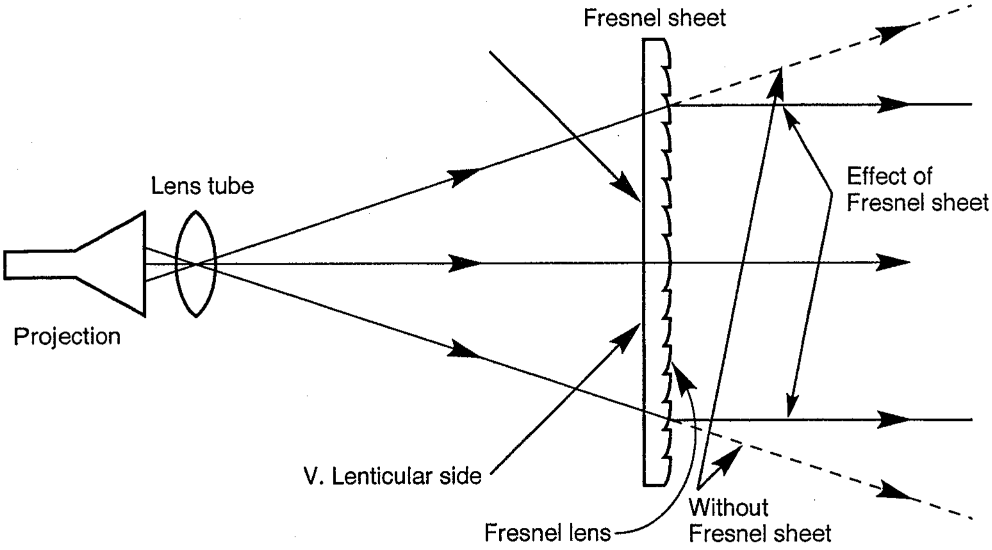

Fresnel sheet
Lens tube
Effect of
Fresnel sheet
Projection
V. Lenticular side
Fresnel lens
Without
Fresnel sheet

Fig. 5-1-1

5-2. Outward Appearance of Lenticular Sheet

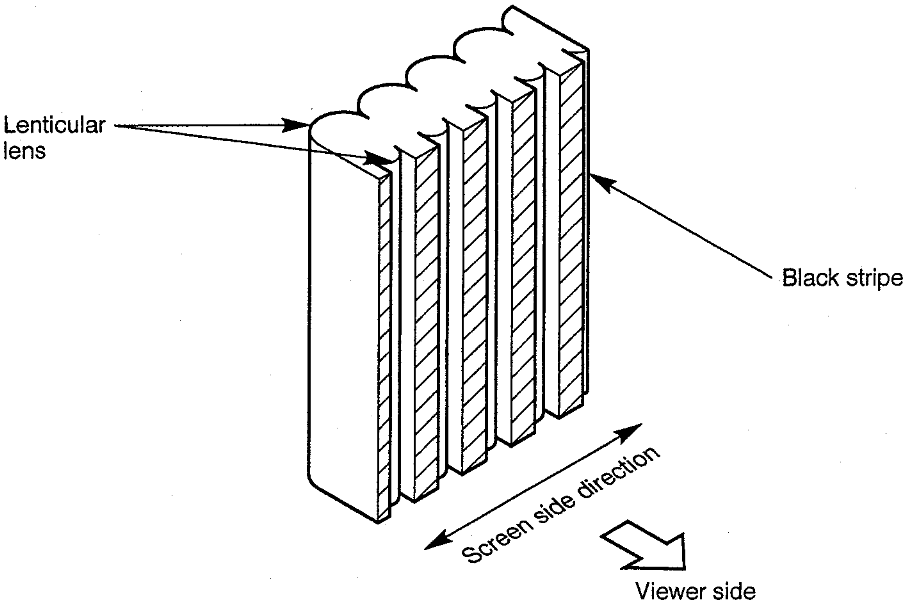

Lenticular
lens
Black stripe
Screen side direction
Viewer side

Fig. 5-2-1

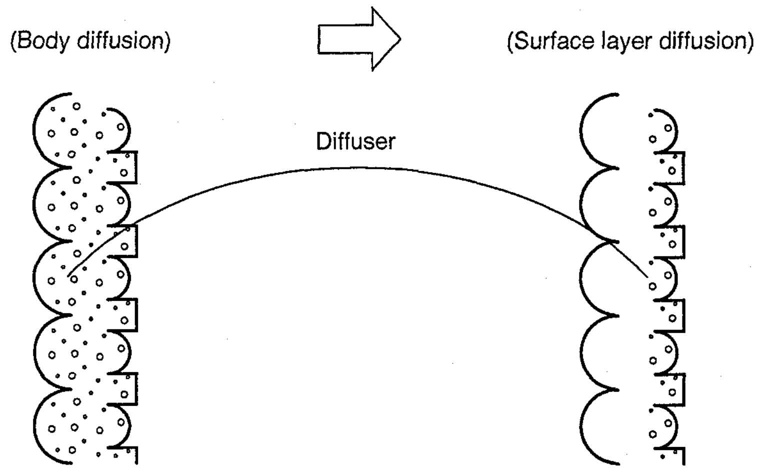

(Body diffusion)
(Surface layer diffusion)
Diffuser

Fig. 5-2-2

Light beams are gathered in diffusers on the layer surface for efficient illumination, and the luminance is consequently raised by 10 % approximately.

This projection unit employs the lenticular sheet for surface diffusion.

5-3. Effect of Lenticular Sheet

The lenticular sheet is effective to diffuse rays that are obliquely applied to the screen similarly to rays irradiated to the screen at a right angle when the screen is viewed from the front.

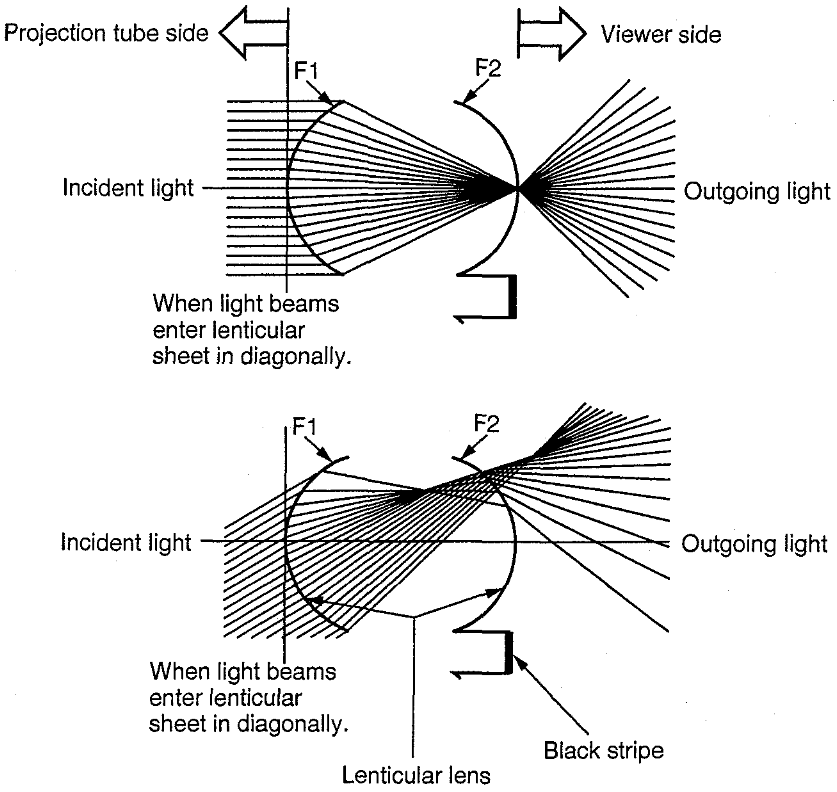

Projection tube side
Viewer side
F1
F2
Incident light
Outgoing light
When light beams enter lenticular sheet in diagonally.
F1
F2
Incident light
Outgoing light
When light beams enter lenticular sheet in diagonally.
Black stripe
Lenticular lens

Fig. 5-3-1

6. EFFECT OF OPTICAL COUPLING

If something (liquid) having a refractive index similar to that of glass fills between the projection tube and the lens, it reduces reflection of rays in the boundary and accordingly improves contrast and loss in quantity of light.

Moreover, such a liquid not only raises the power of the projection tube by its cooling effect but also prevents the surfaces of the projection tube and the lens from getting dust.

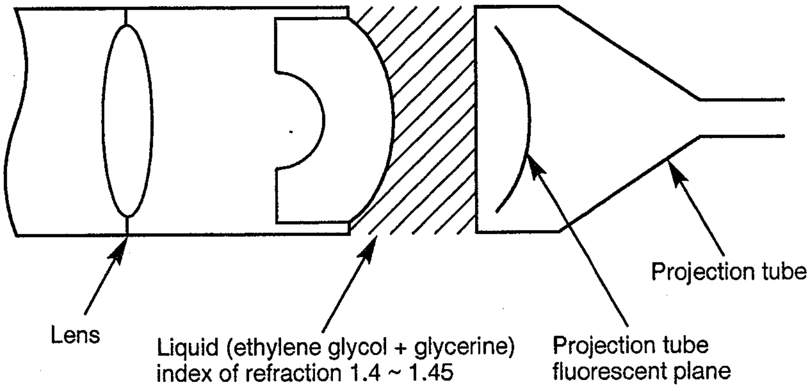

Projection tube
Lens
Liquid (ethylene glycol + glycerine)
index of refraction 1.4 ~ 1.45
Projection tube
fluorescent plane

Fig. 6-1-1

7. LENS

The optical system that is mainly composed of the main lens, concave lens, concave fluorescent screen and projection tube realizes the lens system of a short focal length.

Thanks to the short focal length of the lens system, the projection unit can be designed remarkably thin and compact.

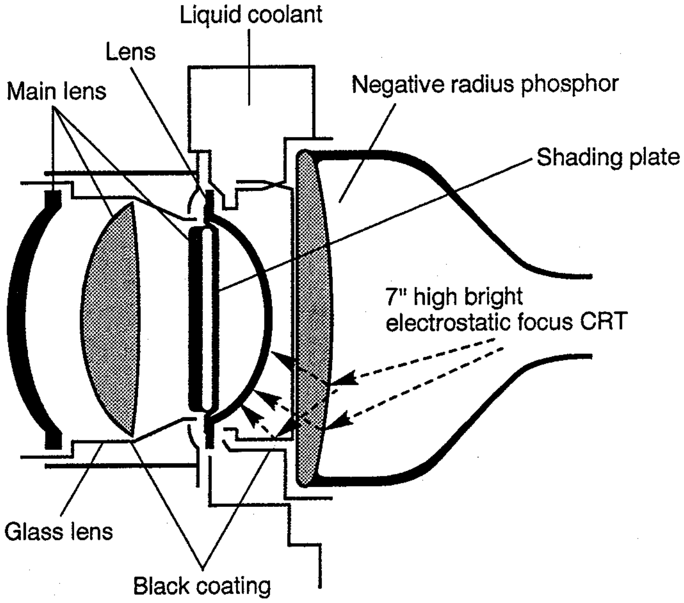

Liquid coolant
Lens
Main lens
Negative radius phosphor
Shading plate
7" high bright
electrostatic focus CRT
Glass lens
Black coating

Fig. 7-1-1

3-5-1. Shading Plate

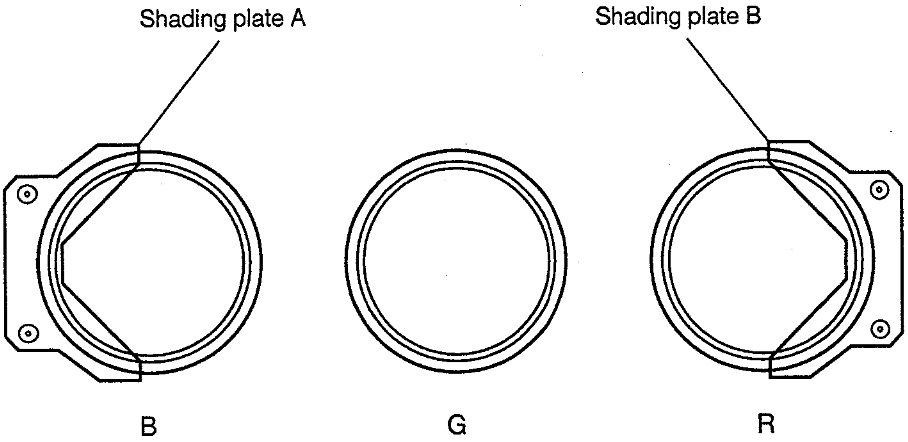


Fig. 3-5-2 C lens and coupling block as viewed from the screen side (Main lenses are removed.)

Two kinds of shading plates (two shading plates in total) are inserted between the C lens (coupling) and the main lens for preventing picture from irregular coloring. Each shading plate is concaved 2 mm to the C lens side.

Don't remove any setscrew retaining the shading plate, otherwise coupling liquid leaks out.

3-5-2. Focus Adjustment

Focalization of the lens system can be adjusted according to the following procedure.

Loosen the setscrew and turn the lens slowly clockwise and counterclockwise to get the lens to come into the best focus on the screen. After this adjustment, tighten the setscrew to secure the lens not to go out of focus.

3-6. Precautions on Replacement of Lens and Projection Tube

When dismounting the main lens, only remove four setscrews (a main lens) retaining it. If any other screw is removed, coupling liquid will leak out.

When mounting the main lens again, loosen the focus adjusting screw and turn the main lens fully counterclockwise as viewed from the screen side beforehand.

The projection tube to be supplied as a service part is an assembly incorporating the C lens and coupling with coupling liquid sealed inside.

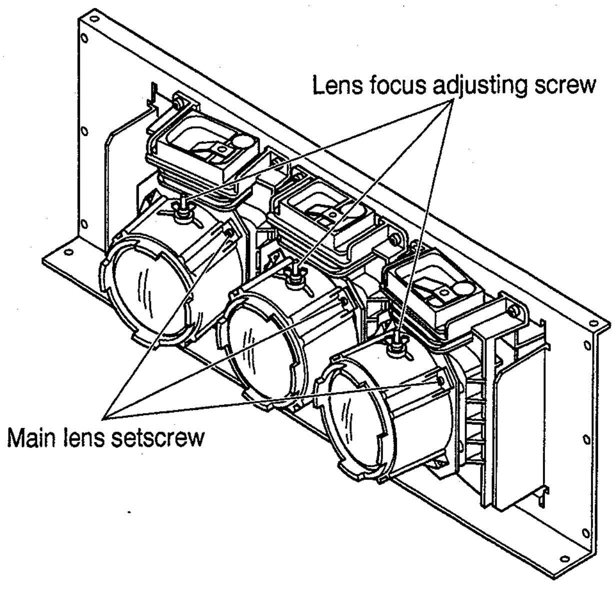
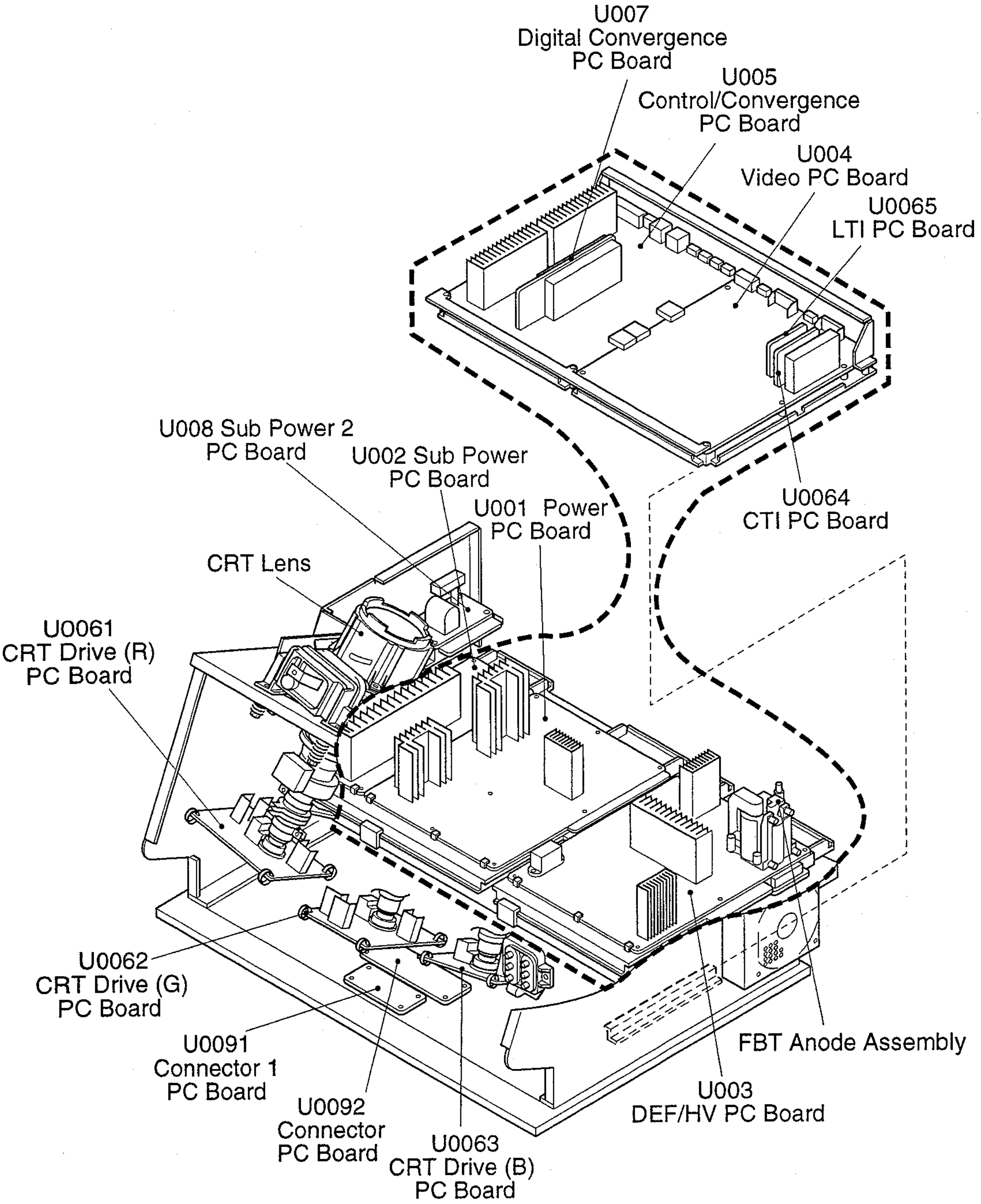


Fig. 3-6-1

4. LOCATION OF MAIN PARTS AND PC BOARDS


U007
Digital Convergence
PC Board
U005
Control/Convergence
PC Board
U004
Video PC Board
U0065
LTI PC Board
U008 Sub Power 2
PC Board
U002 Sub Power
PC Board
U001 Power
PC Board
U0064
CTI PC Board
CRT Lens
U0061
CRT Drive (R)
PC Board
U0062
CRT Drive (G)
PC Board
U0091
Connector 1
PC Board
U0092
Connector
PC Board
U0063
CRT Drive (B)
PC Board
FBT Anode Assembly
U003
DEF/HV PC Board

Note: For the layout of P5031U,
the upper part and lower part are reversed
in the section enclosed with a broken line
(– – –) only.

SECTION 2
PARTS REPLACEMENT AND ADJUSTMENT PROCEDURE

1. PARTS REPLACEMENT

< P5031U >

1-1. DISASSEMBLING

1-1-1. Screen Assembly

(1) Remove 4 screws [A] to remove the wooden front cover.

(2) Remove 2 screws [B] to remove the metal front cover.

(3) Remove 2 hexagon head bolts [C] and 2 screws [D] at the both upper left and right sides of the screen assembly.

(4) Lift up the screen assembly a little, and pull out it in the direction indicated by the arrow mark as shown in Fig 1-1-2 to remove the screen assembly.

(5) For assembling, follow the reverse order of the disassembling.

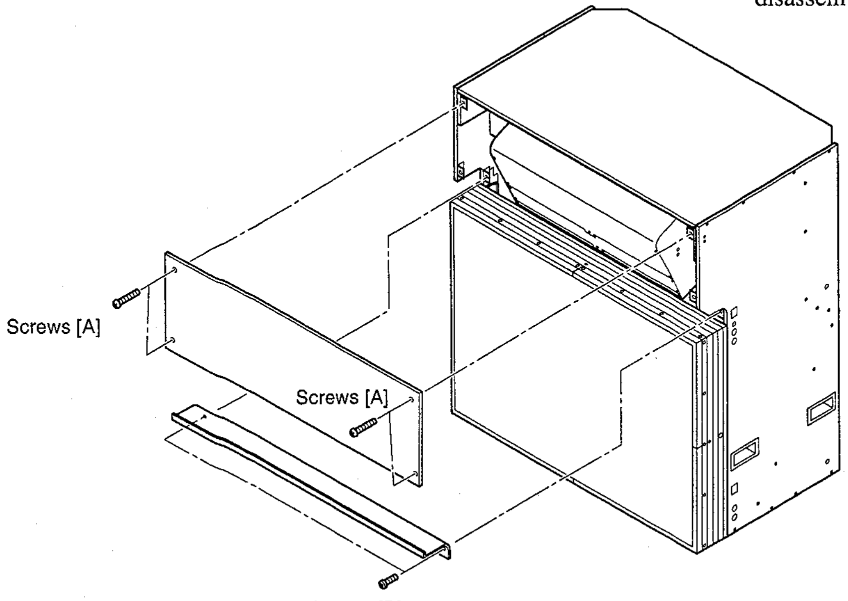

Screws [A]
Screws [A]
Screws [B]

Fig 1-1-1

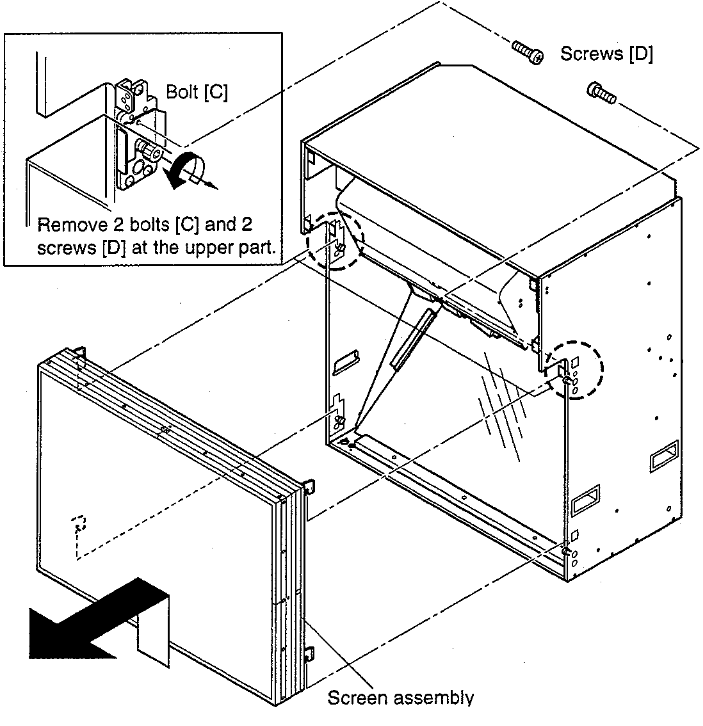

Screws [D]
Bolt [C]
Remove 2 bolts [C] and 2 screws [D] at the upper part.
Screen assembly

Fig 1-1-2

1-1-2. Screen

(1) Remove the screen assembly.

(2) Remove 8 screws [A], and remove the screen holder.

(3) Loosen 5 screws [B] at each the left and right side, which mount the screen holder.

(4) Remove the screen pulling out it from the upper side.

(5) Pay attention to the following items when mounting the screen.

- Put the screen frame on a flat, loosen the securing screws set at three positions, insert the screen into the screen holder, and then mount the screen by sliding downward.
- When assembling the screen, be sure not to make the screen dirty or damage it.

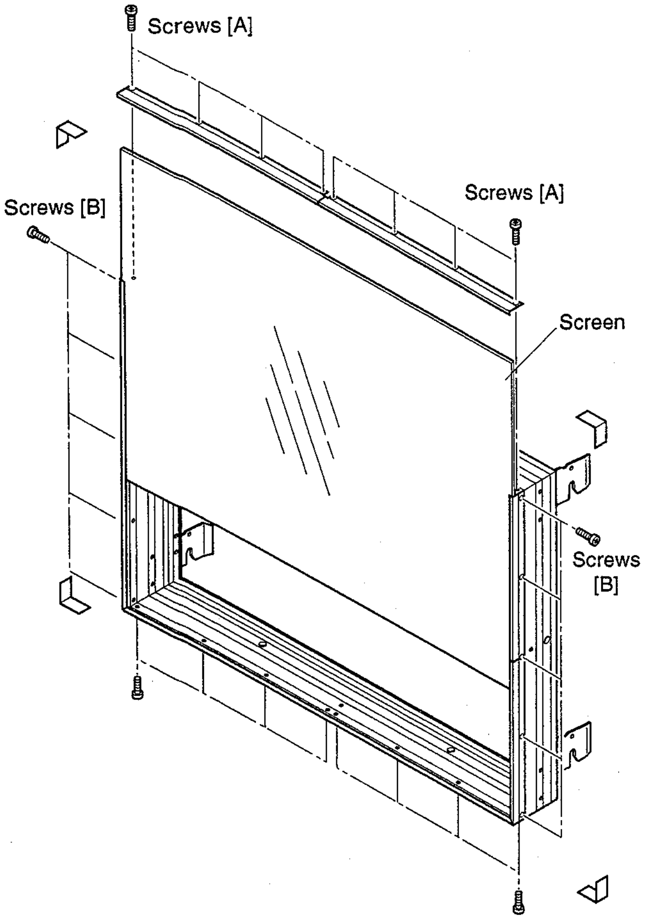


Fig 1-1-3

1-1-3. Mirror

(1) Remove the screen assembly.

(2) Remove 3 screws [A] each at the left and right sides, and remove the bracket.

(3) Remove 8 screws [B] of the stopper metal fitting at the lower side of the mirror to remove the stopper.

(4) Hold the both left and right sides of the mirror, and remove the mirror by pulling out it from the lower side in the forward direction as shown in Fig 1-1-4.

(5) For assembling, follow the reverse order of the disassembling.

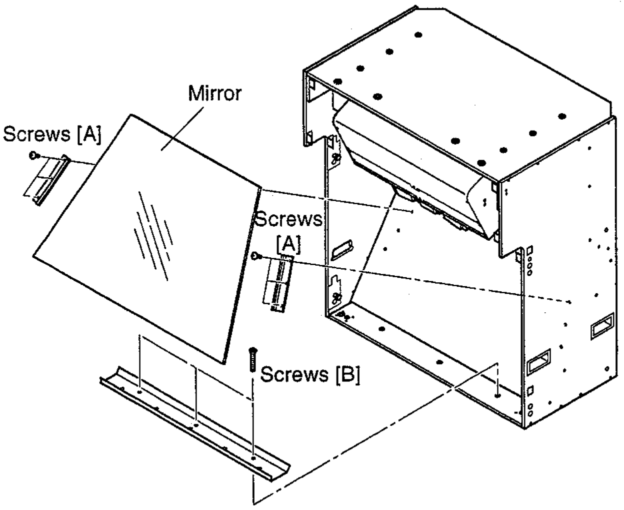


Fig 1-1-4

1-1-4. Control Panel

(1) Remove 7 screws [A] to remove the protection cover.

(2) Remove a screw [B] fixing the grounding wire which is attached to the control panel.

(3) Remove 10 screws [C] and 4 hexagon head bolts [D] fixing the control panel to remove the control panel.

(4) For mounting, follow the reverse order of the removal procedure.

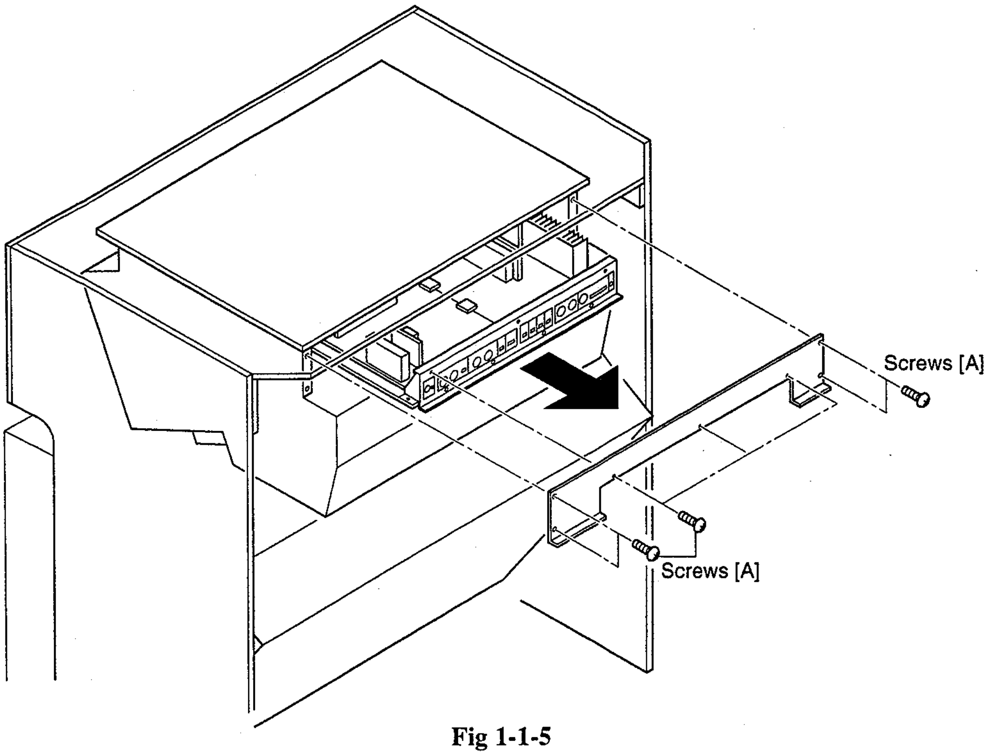

Screws [A]
Screws [A]

Fig 1-1-5

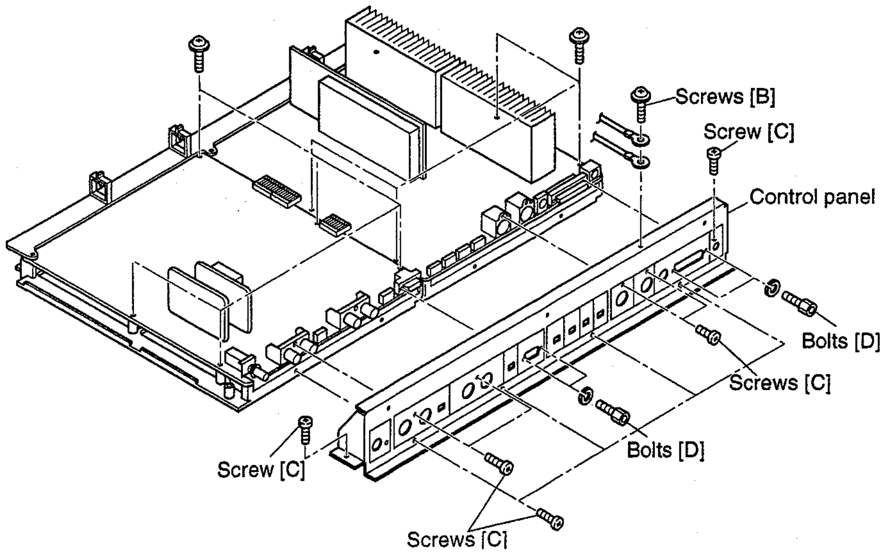

Screws [B]
Screw [C]
Control panel
Bolts [D]
Screws [C]
Bolts [D]
Screw [C]
Screws [C]

Fig 1-1-6

1-1-5. CRT Block Assembly

(1) Remove the screen assembly.

(2) Remove 11 screws [A] to remove the upper protection cover of CRT.

(3) Remove 3 screws [B] to remove the lower protection cover of CRT.

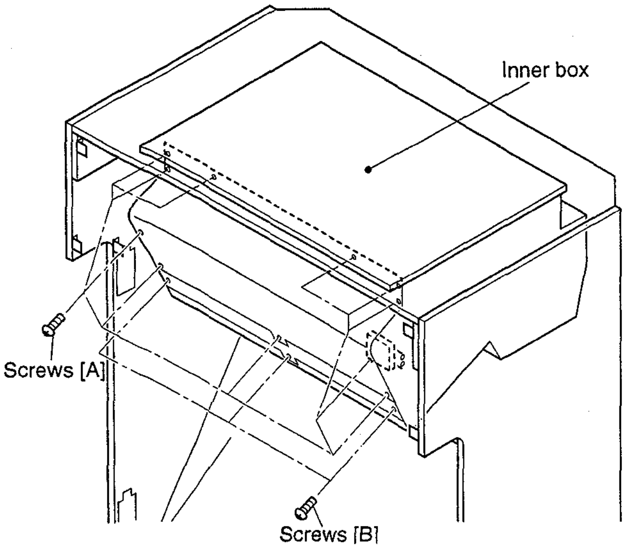


Fig 1-1-7

(4) Remove the cord clamps attached to the CRT drive PC Boards.

(5) Remove the CRT drive PC Boards.

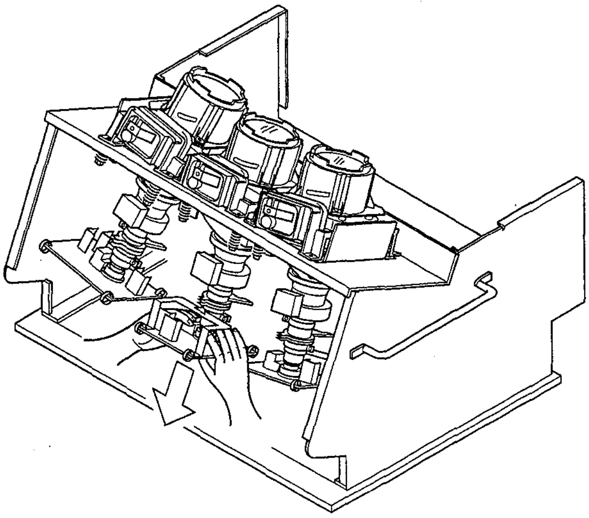


Fig 1-1-8

(6) Remove connectors of the CRT drive PC Board from the CONNECT 1 and CONNECT 2 PC Boards.

(7) Remove the FBT anode cable.

(8) Remove the anode cap.

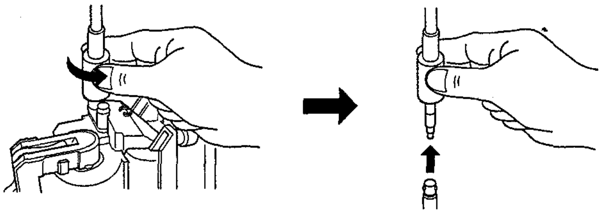


Fig 1-1-9
Removal of FBT anode cable

Fig 1-1-10

(9) Remove the securing screws [E] of the brackets attached to CRT (G) and CRT (B).

(10) Remove a screw [C] to remove the velocity modulation coil.

(11) Remove a screw [D] to remove the deflection yoke coil.

(12) Remove 4 hexagon head bolts [F] to remove the coupling CRT.

(13) For assembling, follow the reverse order of the disassembling.

Note:

Do not loosen the hexagon head bolts with a spring securing the CRT assembly. If the bolts are loosened, it will cause liquid leakage since CRT cooling liquid is filled inside and sealed.

Note:

Be careful to the following points when replacing the coupling CRT.

- Remove (G) of the coupling CRT after (R) and (B) have been removed. Mount (G) also lastly in mounting time.
- When mounting the anode cap, apply silicone (Part code: 23960136) sufficiently around the anode cap.

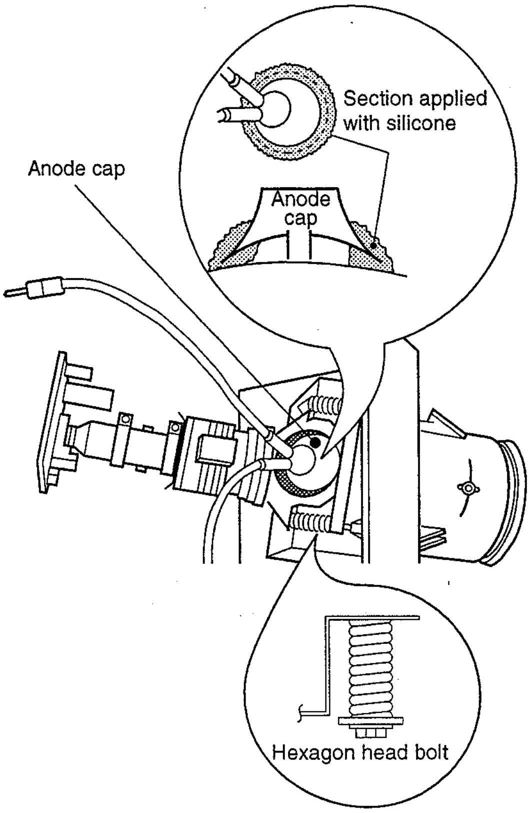

Section applied with silicone
Anode cap
Anode cap
Hexagon head bolt

Fig 1-1-11

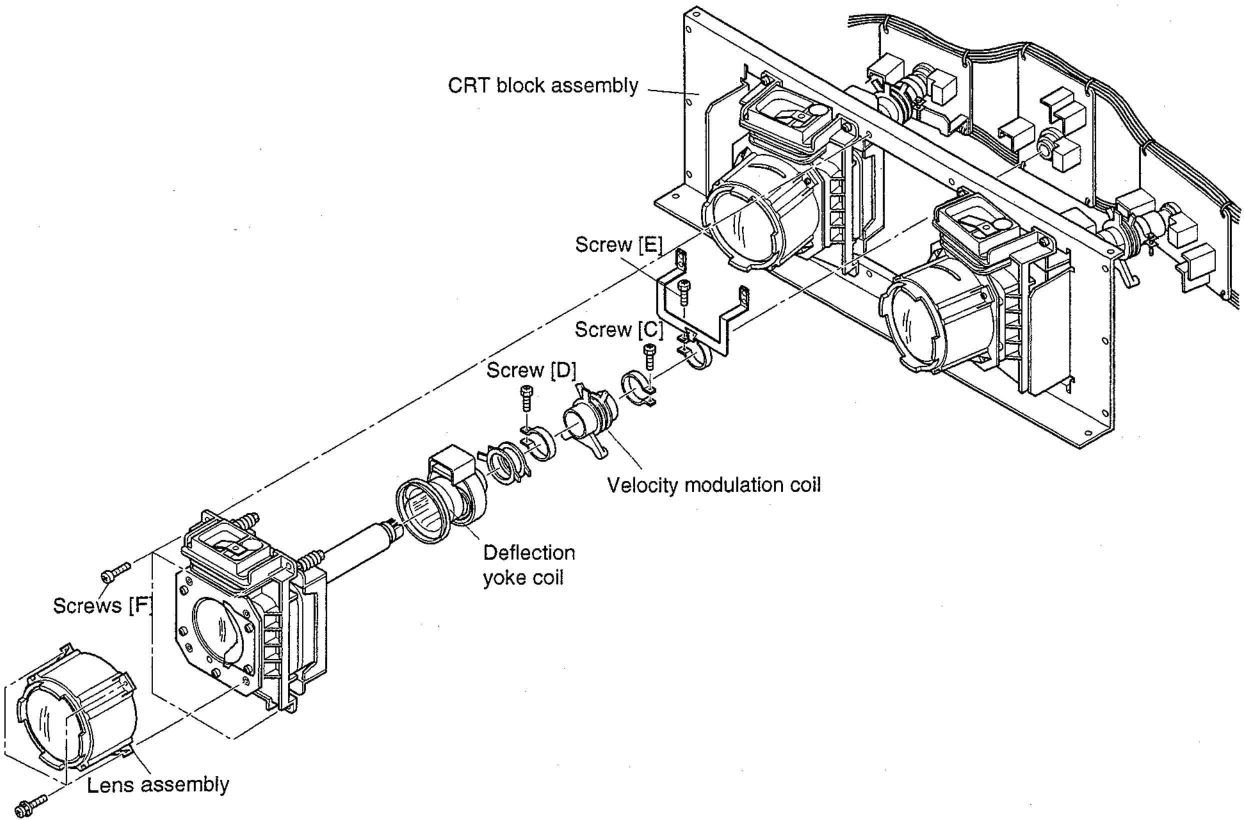

CRT block assembly
Screw [E]
Screw [C]
Screw [D]
Velocity modulation coil
Deflection yoke coil
Screws [F]
Lens assembly

Fig 1-1-12

1-1-6. CRT Lens Assembly

(1) Remove the CRT block assembly.

(2) Remove 4 screws [A] to remove the lens assembly as shown in Fig 1-1-13.

(3) For assembling, follow the reverse order of the disassembling.

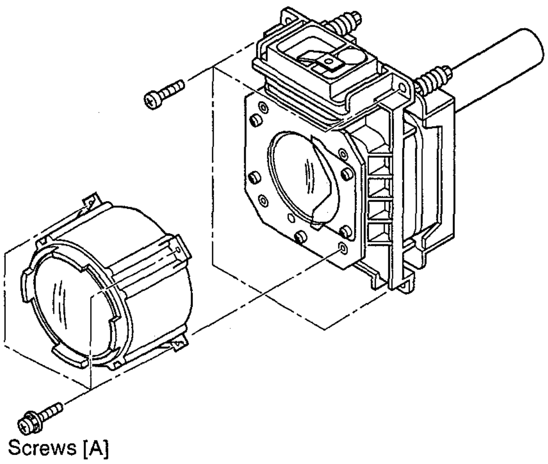


Fig 1-1-13

1-1-7. Fan Motor for CRT Block

(1) Remove the inner unit assembly.

(2) Remove 11 screws [A] to remove the protection cover.

(3) Remove the cord connector of the fan motor for CRT block.

(4) Remove 4 screws [B] to remove the fan motor.

(5) For mounting, follow the reverse order of the removal procedure.

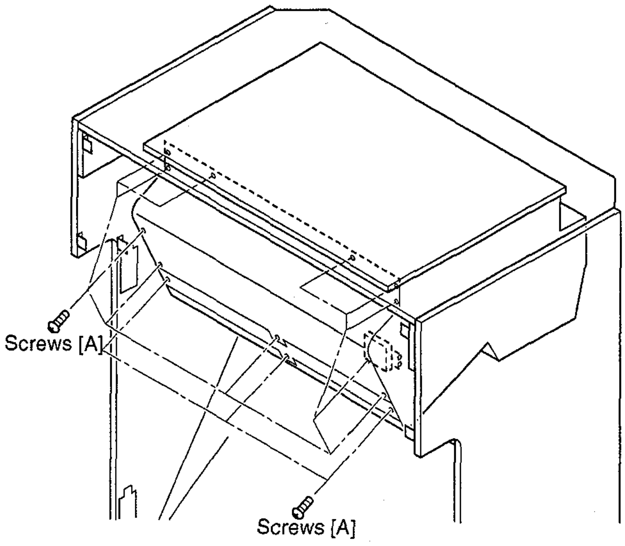

Screws [A]
Screws [A]

Fig 1-1-14

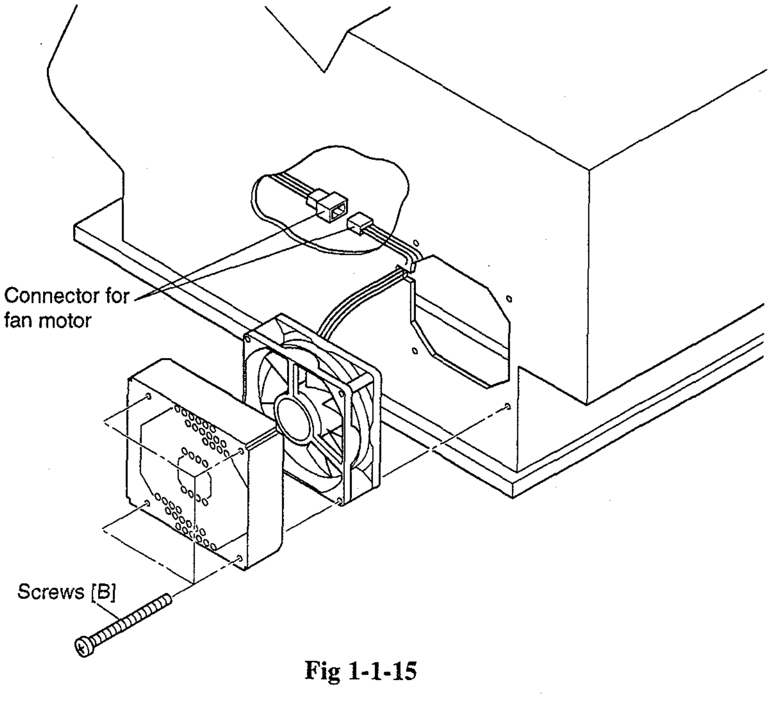

Connector for fan motor
Screws [B]

Fig 1-1-15

1-2. Removal of Each PC Board

1-2-1. Video, Control/Convergence, Digital Convergence, CTI, and LTI PC Boards

(1) Remove the control panel.

(2) Remove the cords from the clamp [A].

(3) Pull out video, control/convergence, digital convergence, CTI, and LTI PC Boards in this side.

(4) Remove 3 screws [F] to remove the cord clamp [A].

(5) CTI PC Board [C] and LTI PC Board [B] are connected to the video Board [E] with a connector. Disconnect the connector to remove each PC Board.

(6) Disconnect the jumper connctors [D] which are connected to 3 positions at video PC Board and control/convergence PC Board.

(7) Remove 5 screws [G] to remove the video PC Board.

(8) Remove 4 screws [H] to remove the control/convergence PC Board.

(The digital convergence PC Board is soldered to the control/convergence PC Board. When removing it, desolder four soldered portions (both left and right sides).)

(9) For mounting, follow the reverse order of the removal procedure.

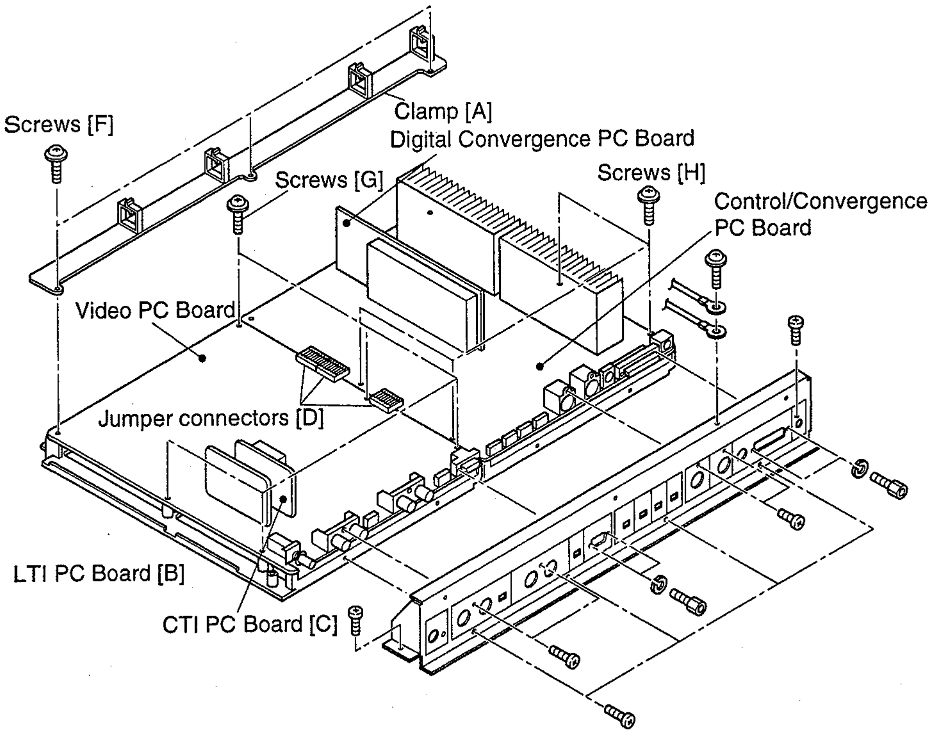

Screws [F]
Clamp [A]
Digital Convergence PC Board
Screws [G]
Screws [H]
Control/Convergence PC Board
Video PC Board
Jumper connectors [D]
LTI PC Board [B]
CTI PC Board [C]

Fig 1-2-1

1-2-2. Power, Sub-Power, Deflection/High Voltage (DEF/HV) PC Boards

(1) Remove 11 screws [A] securing the upper protection cover of CRT in the inner unit.

(2) Remove 3 screws [B] securing the lower protection cover of CRT in the inner unit.

(3) Disconnect the connectors connected to each PC Board.

(4) Remove the FBT anode cable connected to the DEF/ HV PC Board.

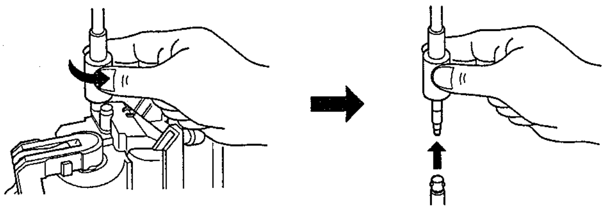


Fig 1-2-2
Removal of FBT anode cable

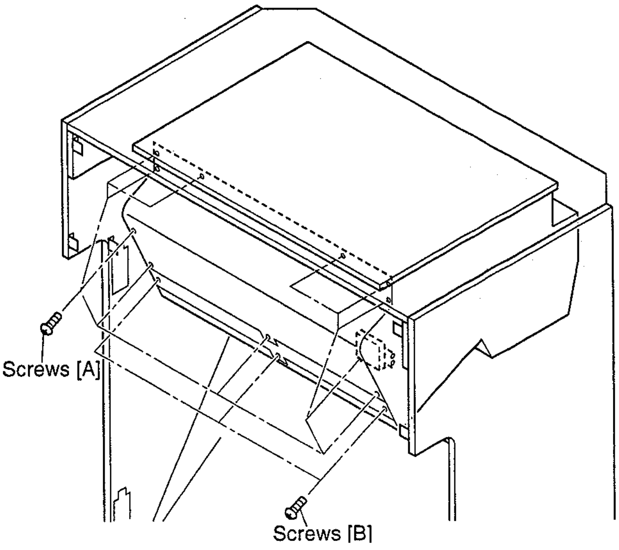


Fig 1-2-3

(5) Remove the cords from the cord clamp attached to CRT lens side.

(6) Loosen a screw [F], remove 10 screws [E], and move the cover [D] in the direction indicated by the arrow mark in Fig 1-2-4 to remove it.

(7) Remove a screw [C] attached to the PC Board fixing tray at power and sub-power sides.

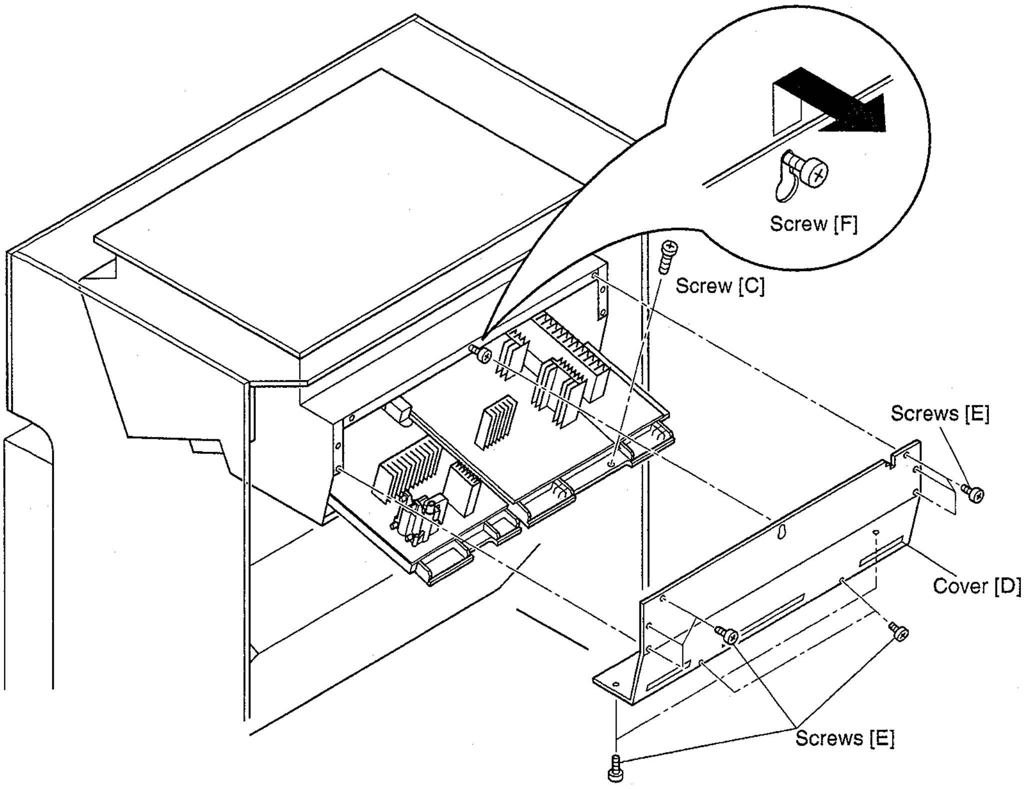


Fig 1-2-4

(8) Remove the power, sub-power, and DEF/HV PC Boards together with the PC Board fixing tray pulling out backward.

(9) Remove 9 screws [G] to remove the DEF/HV PC Board.

(10) Remove 6 screws [H] to remove the power PC Board.

(11) Remove 4 screws [I] to remove the sub-power PC Board.

(12) For mounting, follow the reverse order of the removal procedure.

Note:

- After mounting each PC Board to the PC Board fixing tray, be sure to fit the tray to the guide at the both sides, and push in until the tray touches on the stopper of PC Board fixing tray when assembling PC Board in the CRT block.
- Be careful to insert the PC Board assembly so that cords do not touch on the lower side of the guide or the stopper.

1-2-3. Sub-Power 2 PC Board

(1) Remove the upper protection cover of the CRT block in the inner unit.

(2) Remove the lower protection cover of the CRT block in the inner unit.

(3) Remove a screw [A] fixing the bracket for the sub-power 2 to remove 2 connected connectors.

(4) Remove 2 screws [B] to remove the sub-power 2.

(5) For mounting, follow the reverse order of the removal procedure.

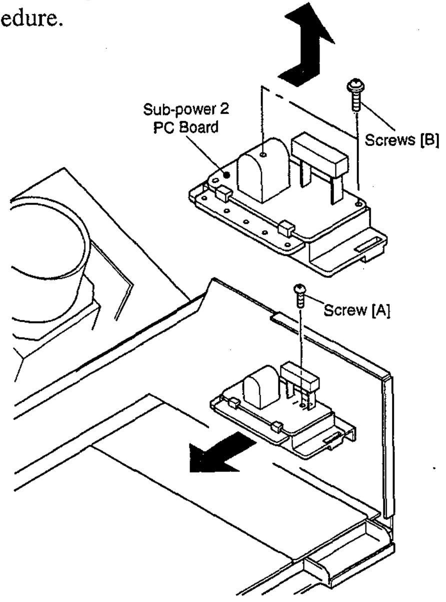

Sub-power 2
PC Board
Screws [B]
Screw [A]

Fig 1-2-5

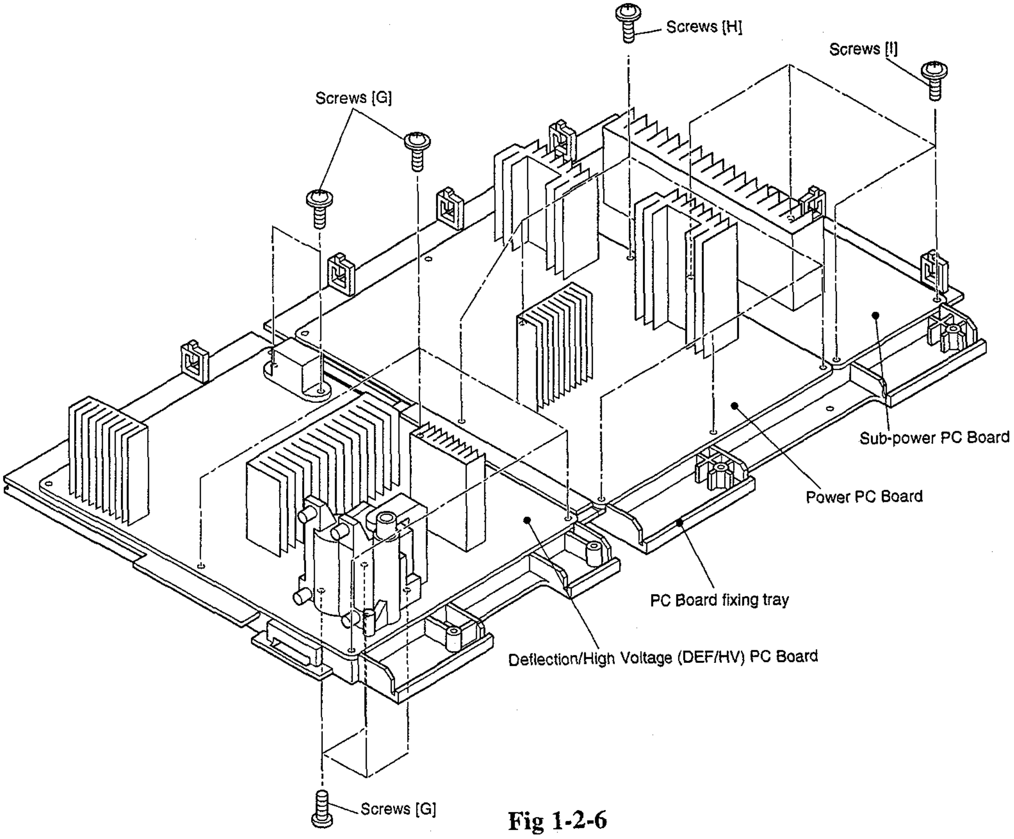

Screws [H]
Screws [I]
Screws [G]
Sub-power PC Board
Power PC Board
PC Board fixing tray
Deflection/High Voltage (DEF/HV) PC Board
Screws [G]

Fig 1-2-6

1-2-4. CRT Drive PC Board

(1) Remove the screen assembly.

(2) Remove 2 bolts [A] to remove the inner unit from the main body.

(3) Remove 11 screws [B] to remove the protection cover.

(4) Reverse the inner unit so that the top plate of the inner unit directs downward.

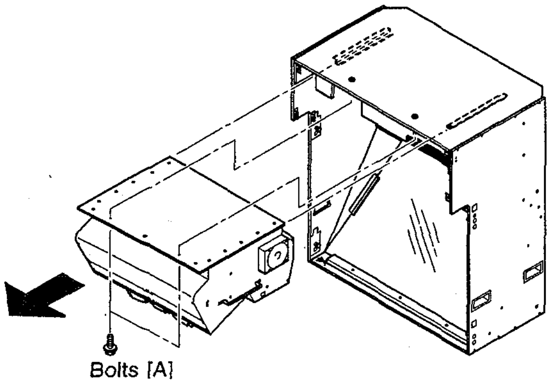


Fig 1-2-7

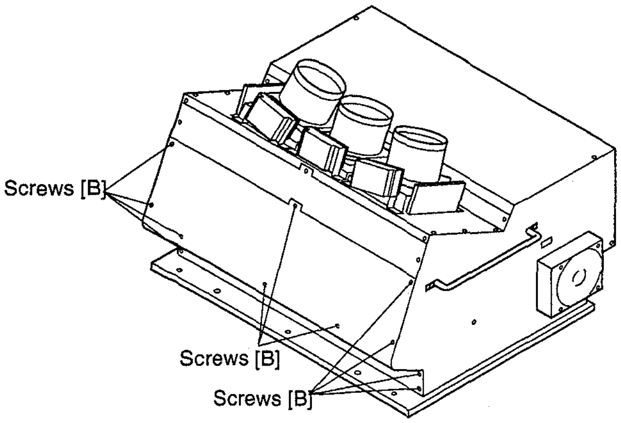

Screws [B]
Screws [B]
Screws [B]

Fig 1-2-8

(5) Remove the cord clamps attached to the CRT drive PC Boards, and make the cords free.

(6) A lead wire is soldered to each PC Board. Unsolder to remove the lead wires.

(7) When removing each PC Board from the CRT body, be sure to hold a position near the connector, and pull out the board.

(8) For mounting, follow the reverse order of the reverse procedure.

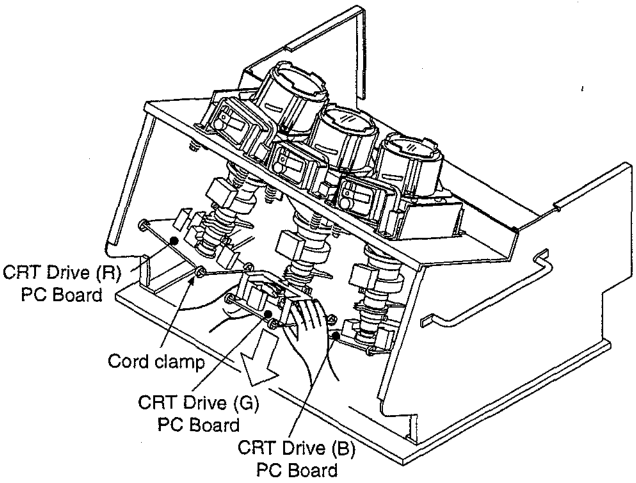

CRT Drive (R) PC Board
Cord clamp
CRT Drive (G) PC Board
CRT Drive (B) PC Board

Fig 1-2-9

< P5032U >

1-3. Disassembling

1-3-1. Screen Assembly

(1) Remove 4 screws [A] to remove the wooden front cover.

(2) Remove 2 screws [B] to remove the metal front cover.

(3) Remove 2 hexagon head bolts [C] at the both upper left and right sides of the screen assembly.

(4) Lift up the screen assembly a little, and pull out it in the direction indicated by the arrow mark as shown in Fig 1-3-2 to remove the screen assembly.

(5) For assembling, follow the reverse order of the disassembling.

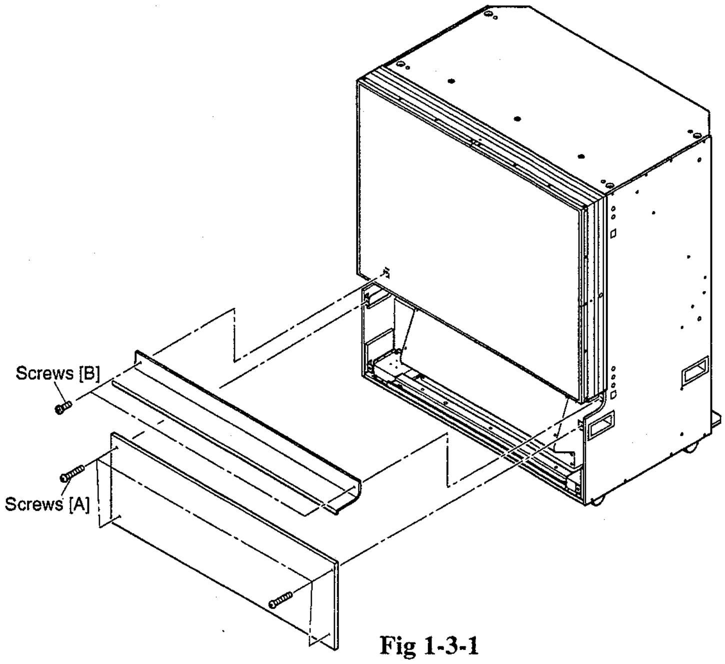

Screws [B]
Screws [A]

Fig 1-3-1

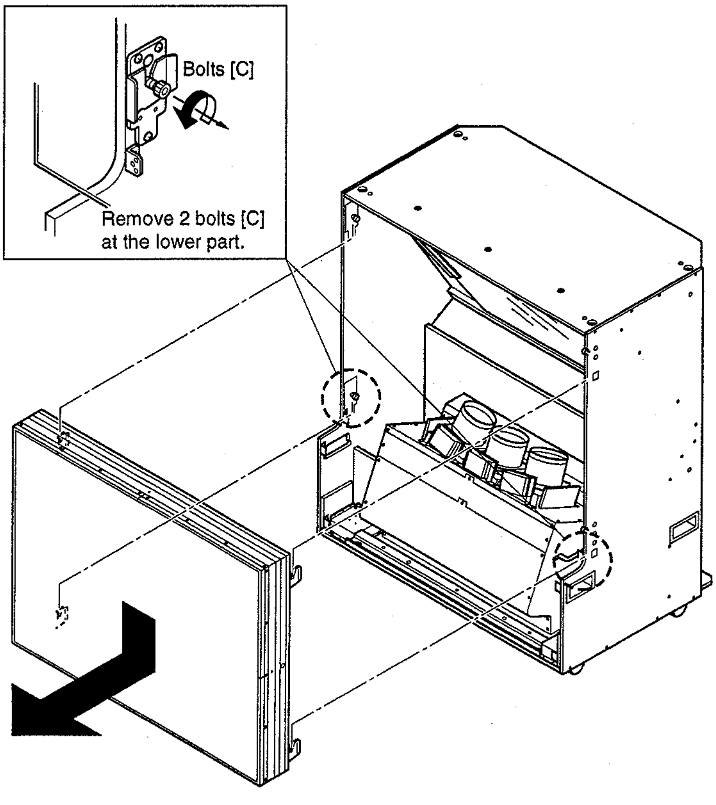

Bolts [C]
Remove 2 bolts [C] at the lower part.

Fig 1-3-2

1-3-2. Screen

(1) Remove the screen assembly.

(2) Remove 8 screws [A], and remove the screen holder.

(3) Loosen 5 screws [B] at each the left and right side, which mount the screen holder.

(4) Remove the screen pulling out it from the upper side.

(5) Pay attention to the following items when mounting the screen.

- Put the screen frame on a flat, loosen the securing screws set at three positions, insert the screen into the screen holder, and then mount the screen by sliding downward.
- When assembling the screen, be sure not to make the screen dirty or damage it.

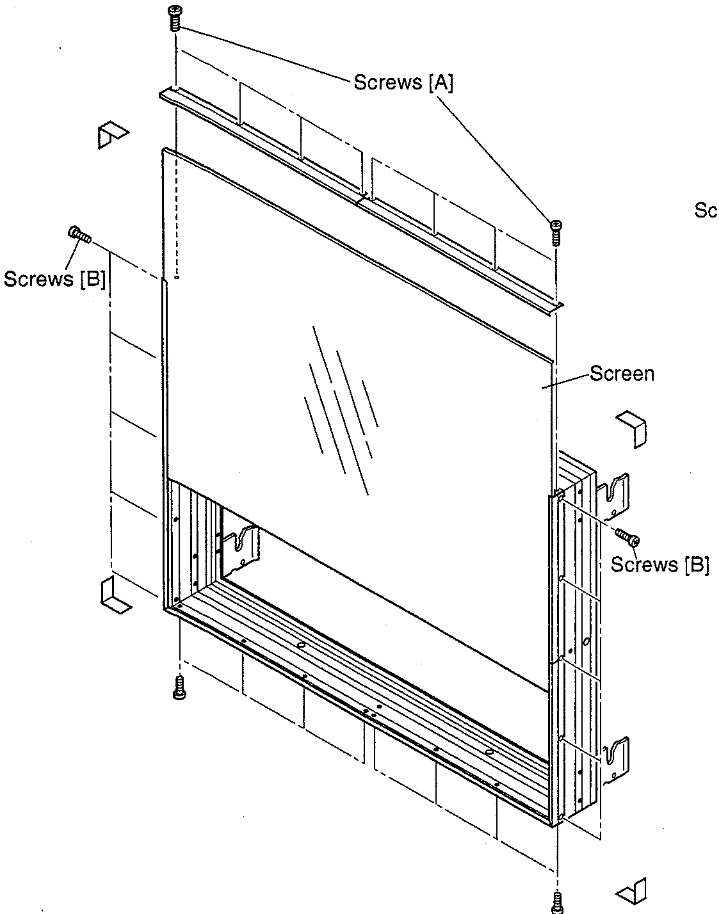


Fig 1-3-3

1-3-3. Mirror

(1) Remove the screen assembly.

(2) Remove 3 screws [A], and remove the bracket.

(3) Remove 3 screws of the wooden stopper at the upper side of the mirror to remove the stopper.

(4) Hold the both left and right sides of the mirror, and remove the mirror by pulling out it from the lower side in the forward direction as shown in Fig 1-3-4.

(5) For assembling, follow the reverse order of the disassembling.

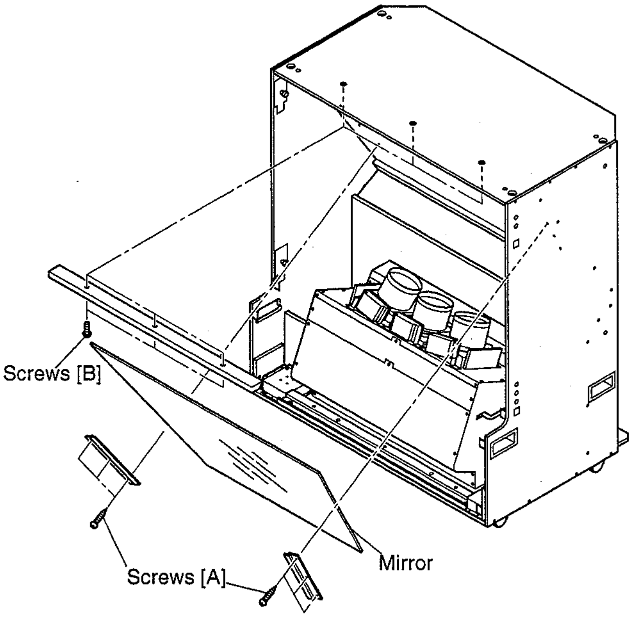


Fig 1-3-4

1-3-4. Control Panel

(1) Remove 8 screws [A] to remove the protection cover.

(2) Remove a screw [B] mounting the grounding wire which is attached to the control panel.

(3) Remove 10 screws [C] and 4 hexagon head bolts [D] fixing the control panel to remove the control panel.

(4) For mounting, follow the reverse order of the removal procedure.

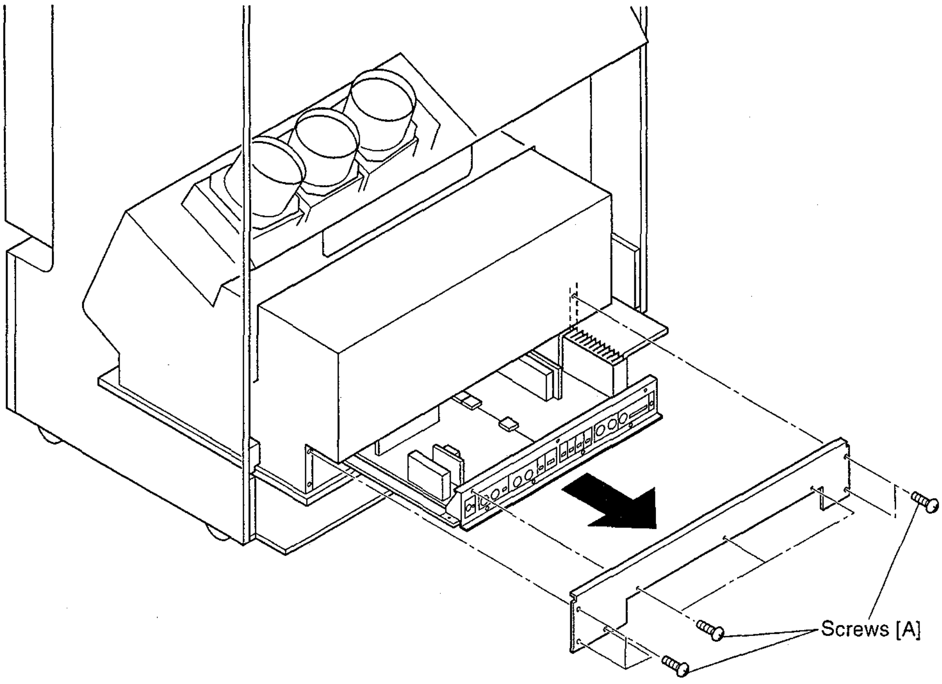


Fig 1-3-5

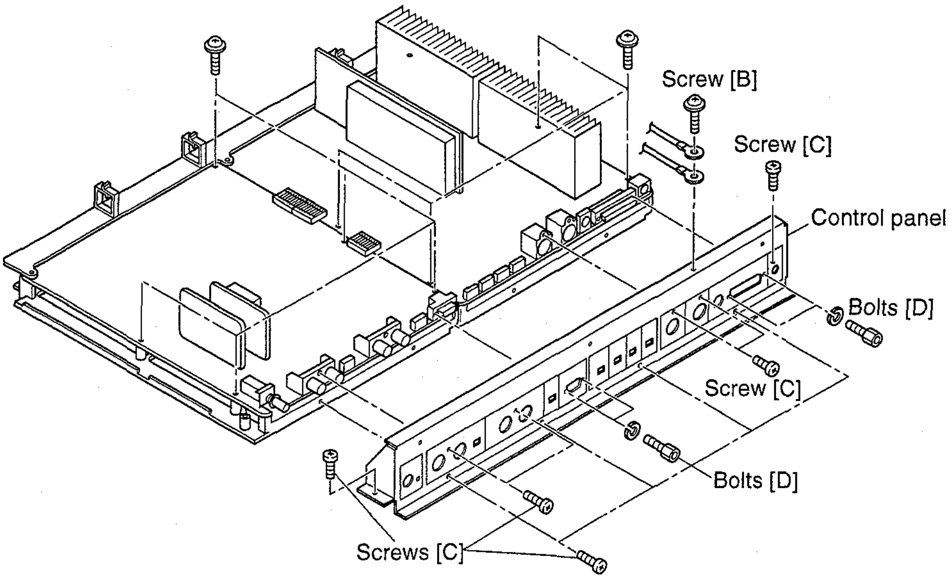

Screw [B]
Screw [C]
Control panel
Bolts [D]
Screw [C]
Bolts [D]
Screws [C]

Fig 1-3-6

1-3-5. CRT Block Assembly

(1) Remove the screen assembly.

(2) Remove 2 bolts [A] to remove the inner unit.

(3) Remove 3 screws [B] securing the protection cover of the inner unit.

(4) Remove 11 screws [C] securing the protection cover of the inner unit.

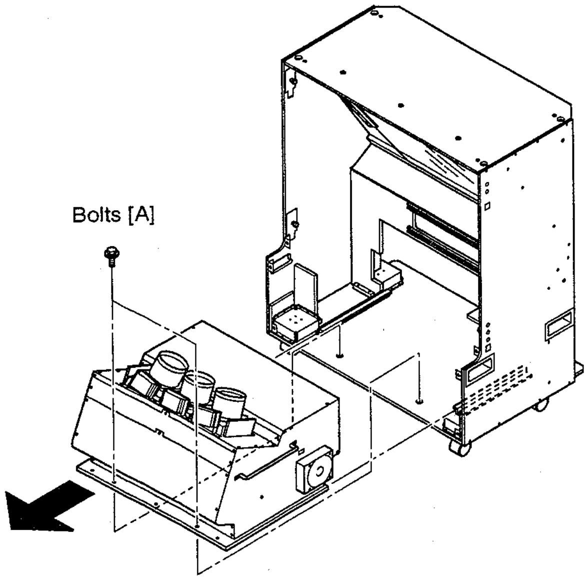


Fig 1-3-7

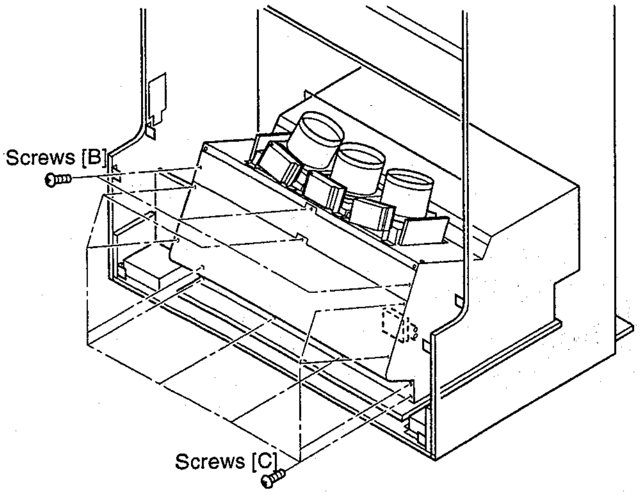


Fig 1-3-8

(5) Remove the cord clamps attached to the CRT drive PC Boards, and make the cords free.

(6) Remove the connectors connected to each R, G, B PC Board, and unsolder the soldered part.

(7) Remove the FBT anode cable.

(8) When removing each PC Board from the CRT body, be sure to hold a position near the connector, and draw out the board.

(9) Remove the anode cap.

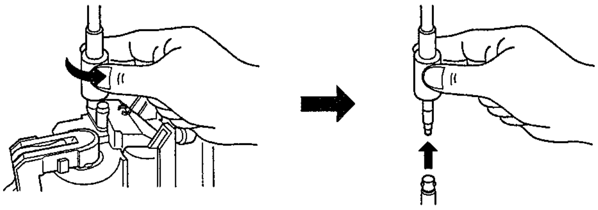


Fig 1-3-9
Removal of FBT anode cable

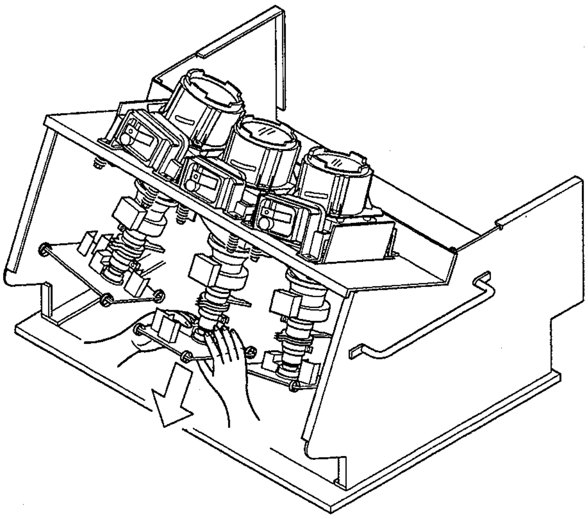


Fig 1-3-10

(10) Remove a screw [D] to remove the velocity modulation coill.

(11) Remove a screw [E] to remove the deflection yoke coill.

(12) Remove 4 hexagon head bolts [F] mounting the coupling CRT to remove it.

(13) For assembling, follow the reverse order of the disassembling.

Note:

Do not loosen the hexagon head bolts with a spring securing the CRT assembly. If the bolts are loosened, it will cause liquid leakage since CRT cooling liquid is filled inside and sealed.

Note:

Be careful to the following points when replacing the coupling CRT.

- Remove (G) of the coupling CRT after (R) and (B) have been removed. Mount (G) also lastly in mounting time.
- When mounting the anode cap, apply silicone (Part code: 23960136) sufficiently around the anode cap.

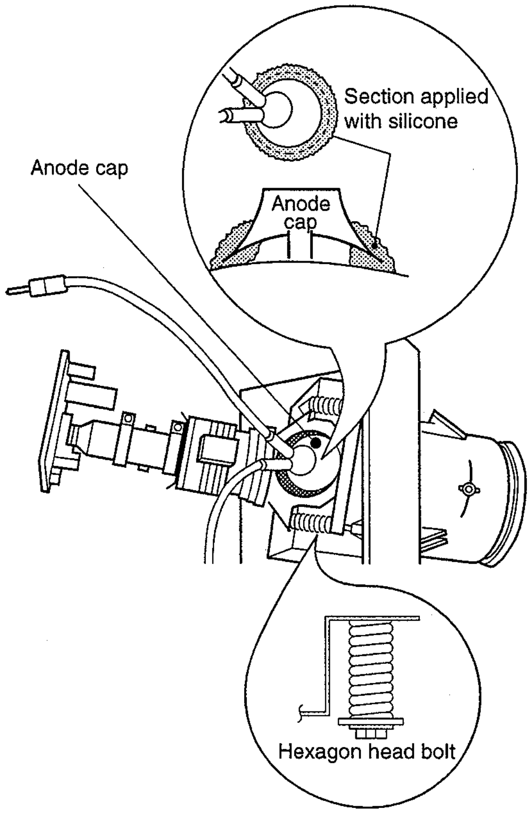

Anode cap
Section applied with silicone
Anode cap
Hexagon head bolt

Fig 1-3-11

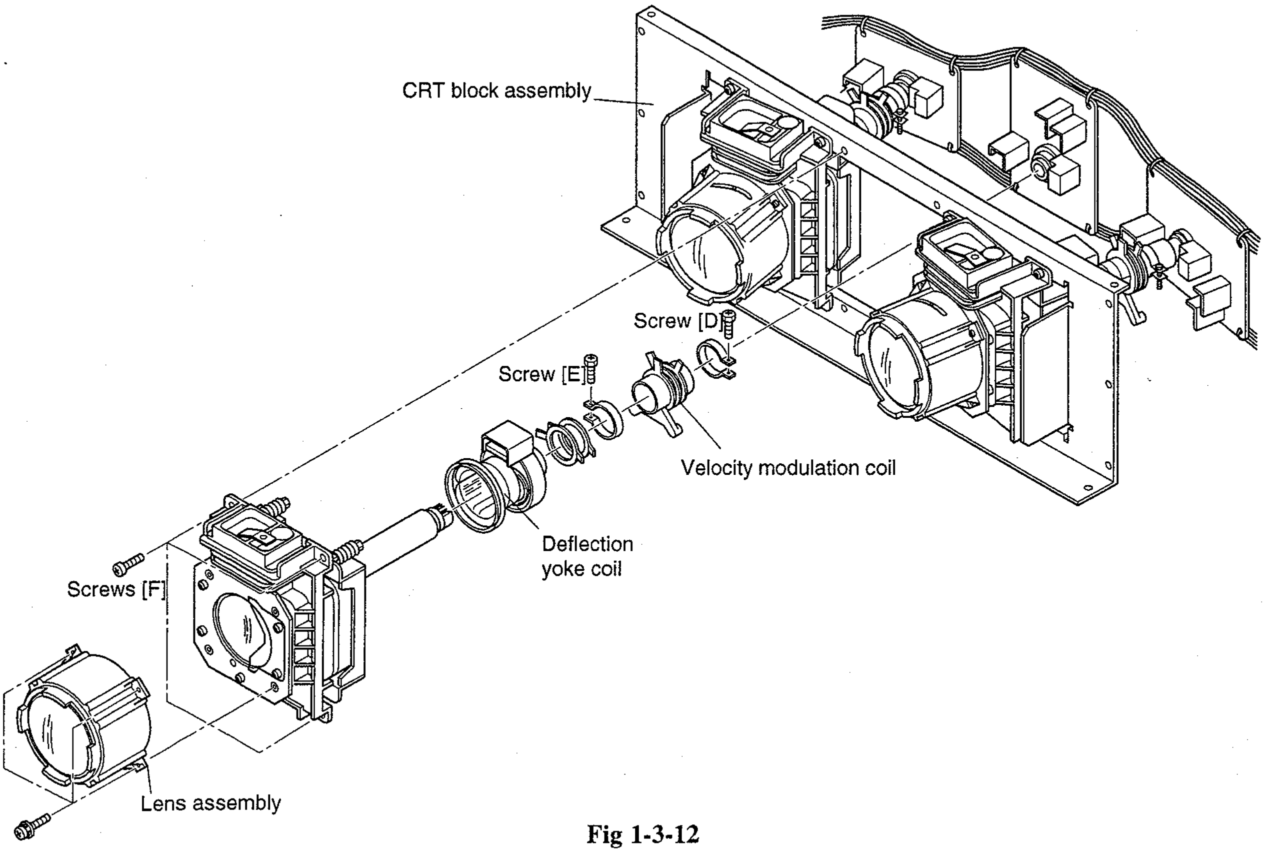

CRT block assembly
Screw [D]
Screw [E]
Velocity modulation coil
Deflection yoke coil
Screws [F]
Lens assembly

Fig 1-3-12

1-3-6. CRT Lens Assembly

(1) Remove the screen assembly.
(2) Remove the screen assembly from the inner unit.
(3) Remove 4 screws [A] to remove the CRT lens.
(4) For assembling, follow the reverse order of the disassembling.

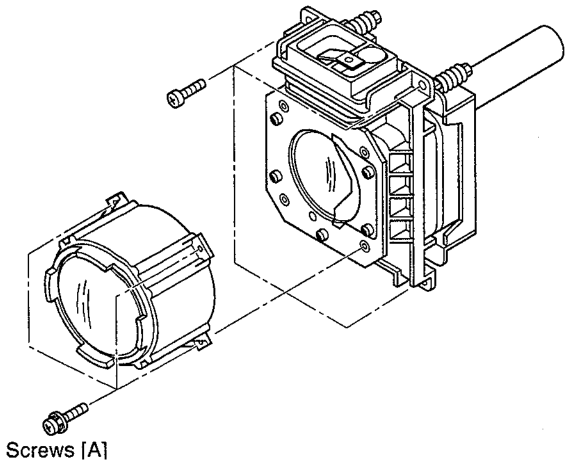


Fig 1-3-13

1-3-7. Fan Motor for CRT Block

(1) Remove 2 bolts [A] fixing the inner unit, and remove the CRT block assembly.
(2) Remove 8 screws [B] to remove the protection cover.
(3) Remove the cord connector of the fan motor for CRT block.
(4) Remove 4 screws [C] to remove the fan motor.
(5) For mounting, follow the reverse order of the removal procedure.

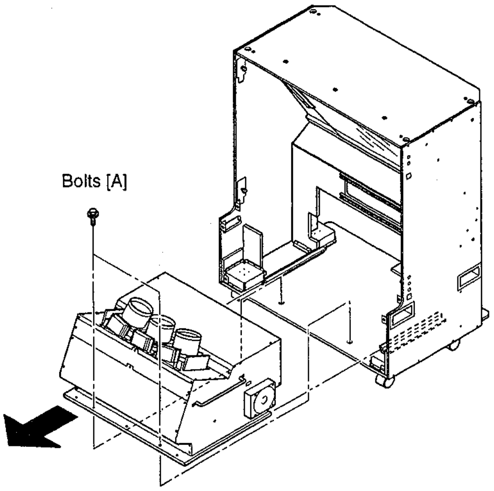


Fig 1-3-14

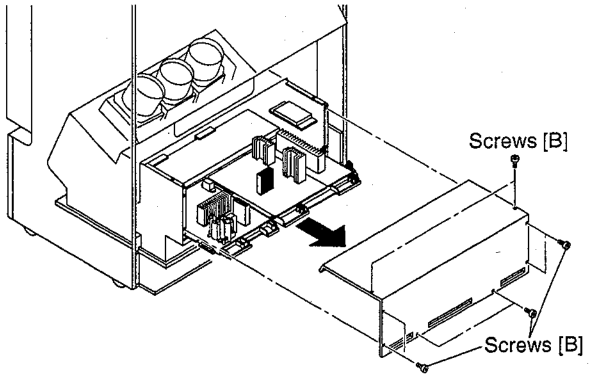

Screws [B]
Screws [B]

Fig 1-3-15

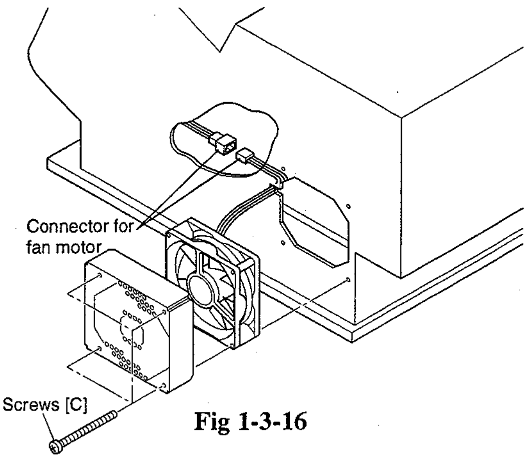

Connector for fan motor
Screws [C]

Fig 1-3-16

1-4. Removal of Each PC Board

1-4-1. Power, Sub-Power, Sub-Power 2, and Deflection/High Voltage (DEF/HV) PC Boards

(1) Remove the wooden and metal front covers.

(2) Remove the screen assembly.

(3) Remove the inner unit from the main body.

(4) Remove 8 screws [A] securing the protection cover of the inner unit.

(5) Draw out the PC Board fixing tray which each PC Board is mounted to.

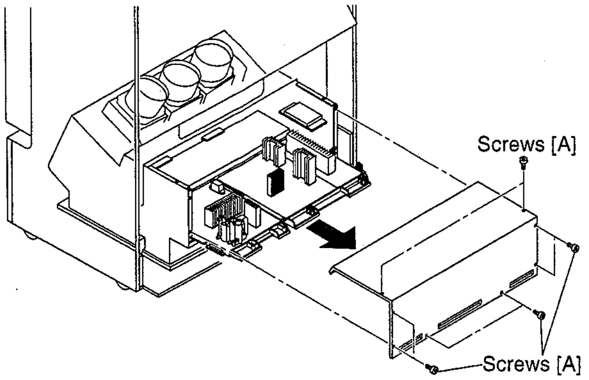

Screws [A]
Screws [A]

Fig 1-4-1

(6) Disconnect the cords connected to each PC Board from the cord clamps.

(7) Remove each cord connector connected to each PC Board.

(8) Remove the FBT anode cap.

Push down the rubber of the FBT anode cable, turn conterclockwise to unlock, and then remove the anode cap lifting it up.

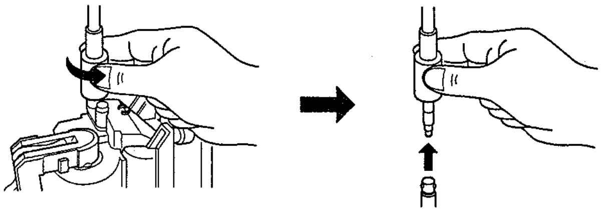


Fig 1-4-2
Removal of FBT anode cable

(9) Remove 6 screws [B] to remove the DEF/HV PC Board.

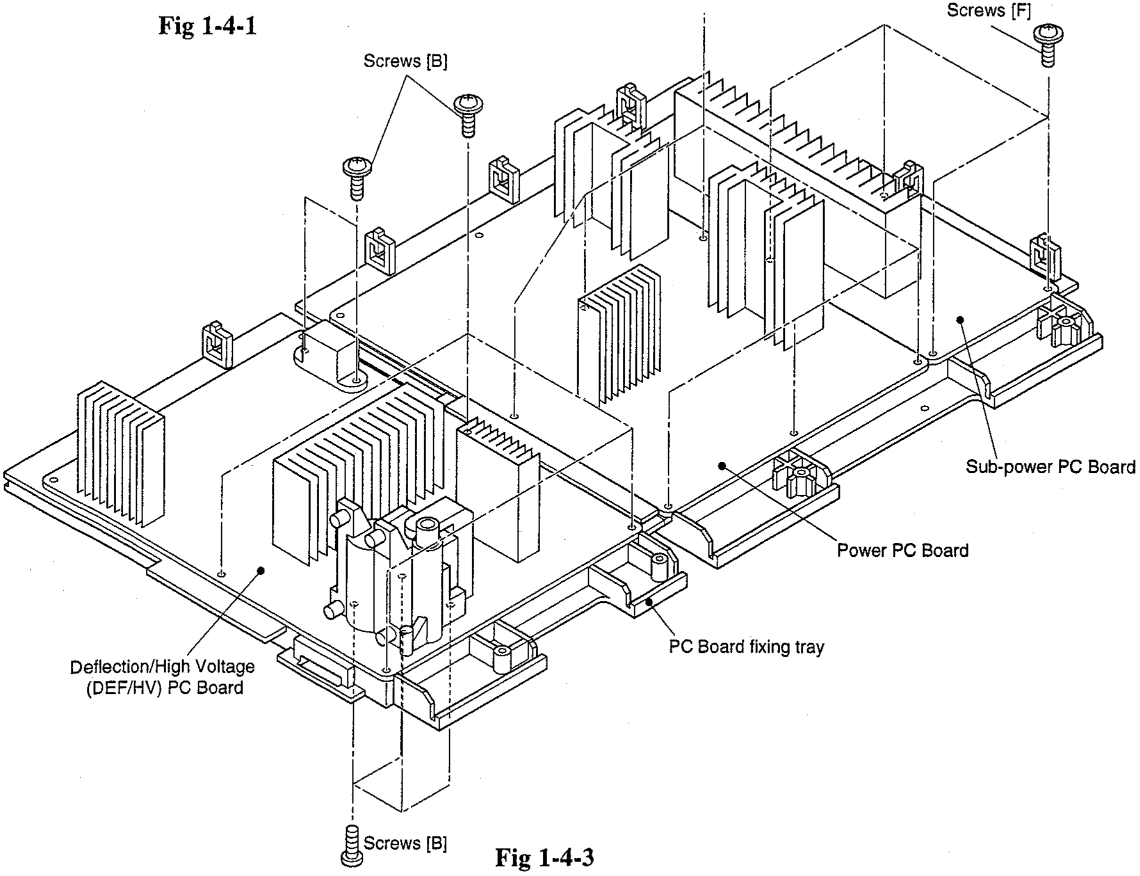

Screws [E]
Screws [F]
Screws [B]
Sub-power PC Board
Power PC Board
PC Board fixing tray
Deflection/High Voltage (DEF/HV) PC Board
Screws [B]

Fig 1-4-3

(10) Remove 2 screws [C] to remove the sub-power 2 PC Board.

(11) Remove 2 screws [D] to remove the sub-power 2 PC Board.

(12) Remove 6 screws [E] to remove the power PC Board.

(13) Remove 4 screws [F] to remove the sub-power PC Board.

(14) For assembling, follow the reverse order of the disassembling.

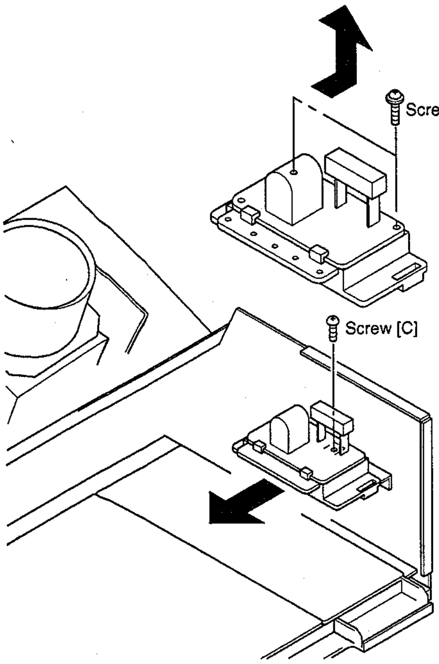

Screws [D]
Screw [C]

Fig 1-4-4

1-4-2. Video, Control/Convergence, RGB, CTI, LTI, and Digital Convergence PC Boards

(1) Remove the control panel.

(2) Pull out the PC Board fixing tray which each PC Board is mounted to from the CRT block, and remove the tray.

(3) Remove the cords which are connected to each PC Board.

(4) CTI [C] PC board and LTI [B] PC Board are connected to the video PC Board with a connector. Disconnect the connector to remove each PC Board.

(5) Disconnect 3 jumper connectors [D] which are connected to the video PC Board and control/convergence PC Board.

(6) Remove the cords from the 4 cord clamps mounted on the video PC Board and control/convergence PC Board.

(7) Remove 6 screws [E] to remove the video PC Board.

(8) Remove 3 screws [G] to remove the cord clamp [A].

(9) Remove 6 screws [F] to remove the control/convergence PC Board.

(The digital convergence PC Board is soldered to the control/convergence PC Board. When removing it, desolder four soldered portions (both left and right sides).)

(10) For mounting, follow the reverse order of the removal procedure.

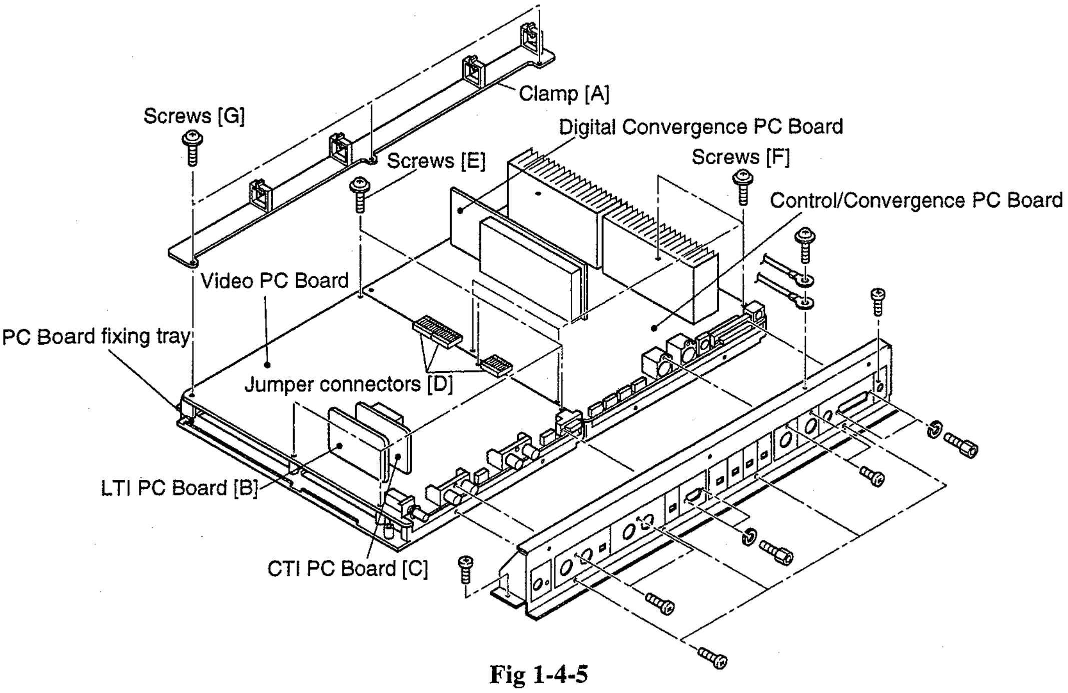

Clamp [A]
Screws [G]
Digital Convergence PC Board
Screws [E]
Screws [F]
Control/Convergence PC Board
Video PC Board
PC Board fixing tray
Jumper connectors [D]
LTI PC Board [B]
CTI PC Board [C]

Fig 1-4-5

1-4-3. CRT Drive PC Board

(1) Remove the screen assembly.

(2) Remove 2 bolts [A] to remove the inner unit from the main body.

(3) Remove 3 screws [B] securing the protection cover of the inner unit.

(4) Remove 11 screws [C] securing the protection cover of the inner unit.

(5) Remove the cord clamps attached to the CRT drive PC Boards, and make the cords free.

(6) Remove the connector and soldered portion connected to each PC Board.

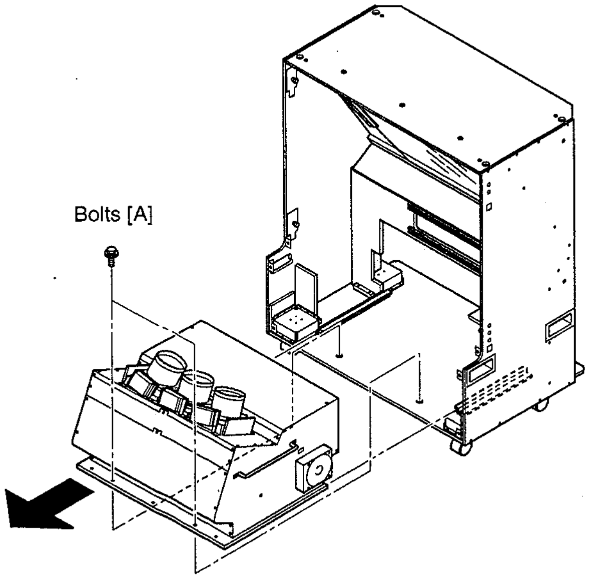


Fig 1-4-6

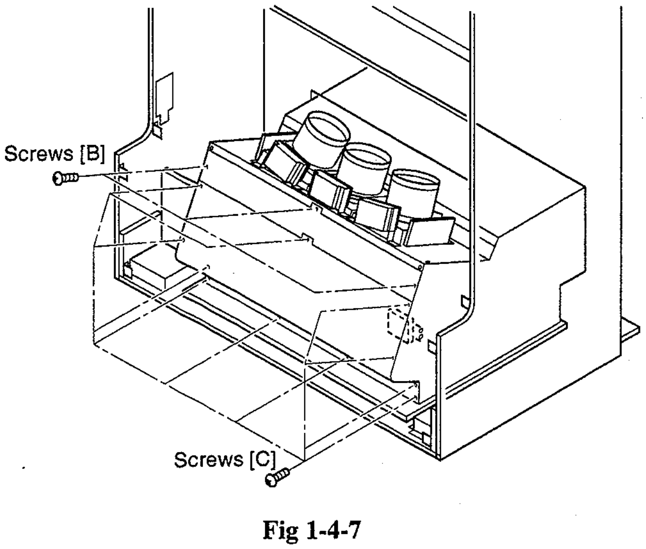

Screws [B]
Screws [C]

Fig 1-4-7

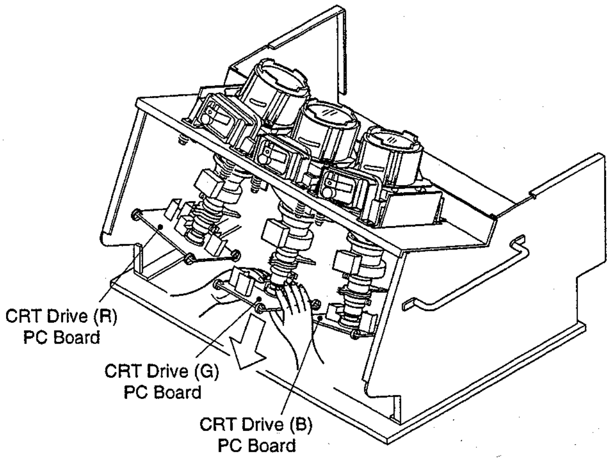

CRT Drive (R) PC Board
CRT Drive (G) PC Board
CRT Drive (B) PC Board

Fig 1-4-8

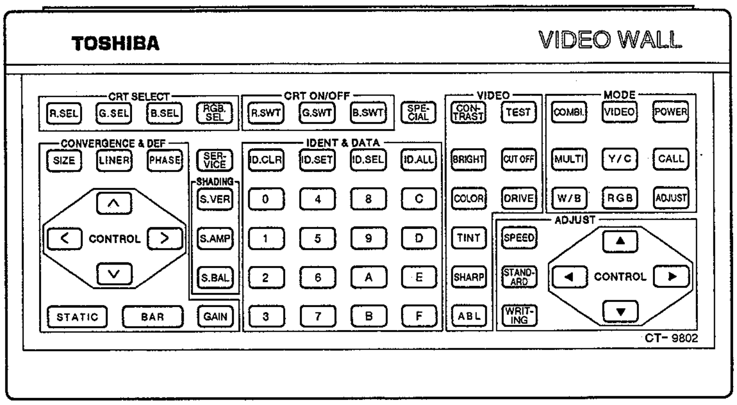
(7) When removing each PC Board from the CRT body, be sure to hold a position near the connector, and draw out the board.

(8) For mounting, follow the reverse order of the removal procedure.

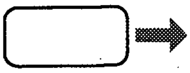
2. ELECTRICAL ADJUSTMENT

1) Test Equipment / Test Jig

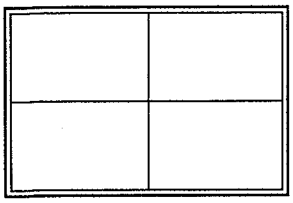
- Oscilloscope
  (2 channel, Frequency range 15MHz with Delay)
- Digital Voltmeter
- High Voltage Meter
- W / B Checker
  (MINOLTA TV-2130)
- Remote Controller (CT-9802)...... 23306108
- Cable for Remote Control 23502464


TOSHIBA
VIDEO WALL
CRT SELECT
R.SEL
G.SEL
B.SEL
RGB. SEL
CRT ON/OFF
R.SWT
G.SWT
B.SWT
SPE-CIAL
VIDEO
CON-TRAST
TEST
MODE
COMBI.
VIDEO
POWER
CONVERGENCE & DEF
SIZE
LINER
PHASE
SER-VICE
IDENT & DATA
ID.CLR
ID.SET
ID.SEL
ID.ALL
BRIGHT
CUT OFF
MULTI
Y/C
CALL
SHADING
S.VER
0
4
8
C
COLOR
DRIVE
W/B
RGB
ADJUST
CONTROL
S.AMP
1
5
9
D
TINT
SPEED
S.BAL
2
6
A
E
SHARP
STAND-ARD
STATIC
BAR
GAIN
3
7
B
F
ABL
WRIT-ING
CT- 9802

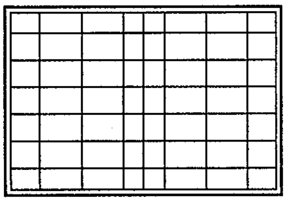
< Remote Controller CT-9802 >

-  shows the operating order of the remote control key.

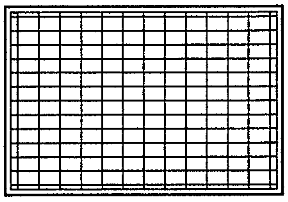
2) Internal Test Signal



TEST 1
(Cross pattern)

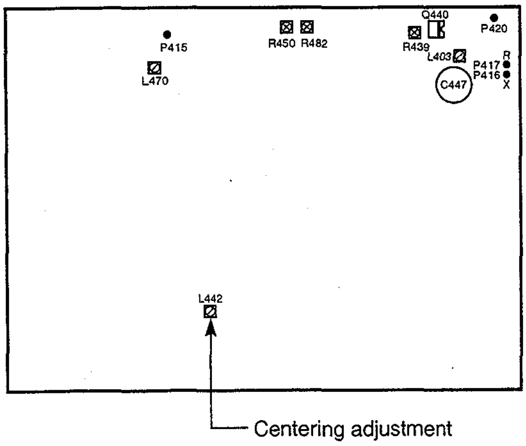


TEST 2
(Sparse cross hatch)

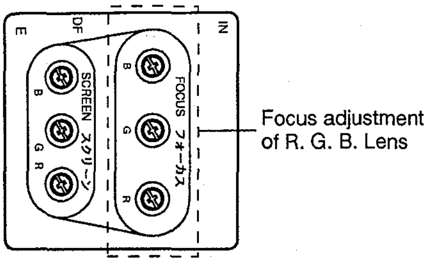


TEST 3
(Dense cross hatch)

2-1. CRT Adjustment


P415
L470
R450 R482
Q440
R439
L403
P420
R
P417
P416
X
C447
L442
Centering adjustment

< Deflection/High voltage PC Board >


E
DF
N
SCREEN スクリーン
B
G
R
FOCUS フォーカス
B
G
R
Focus adjustment of R. G. B. Lens

< Focus pack >

2-1-1. Focus Adjustment of R. G. B. Lens

Input signal : Pseudo NTSC, TEST 1 (cross pattern)

Adjusting point : Focus adjustment screw, Focus VR

(1) Input the pseudo NTSC signal (non interlace)

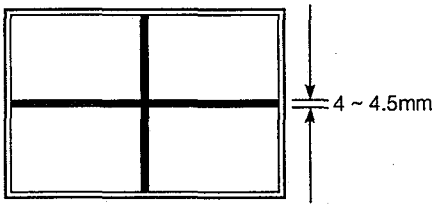
(2) TEST 1 (cross pattern) signal is displayed by

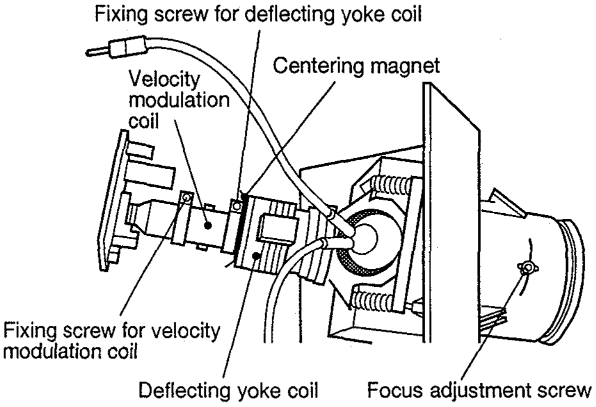
ADJUST ➡ TEST keys.

(3) Adjust the focus adjustment screw of each lens for R, G, B so that the focus of picture becomes best in center.

(4) After adjusting the focus of lenses, adjust the focus VR on the focus pack so that each focus of R, G, B becomes best.

(5) Adjust the focus VR (B) turning clockwise slowly so that the width of horizontal line becomes 4 ~ 4.5 mm.




Fixing screw for deflecting yoke coil
Velocity modulation coil
Centering magnet
Fixing screw for velocity modulation coil
Deflecting yoke coil
Focus adjustment screw

2-1-2. TILT Adjustment

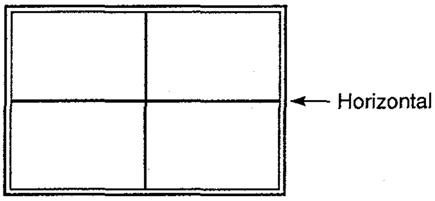
Input signal : TEST 1 (cross pattern)

Adjusting point : Deflecting yoke coil

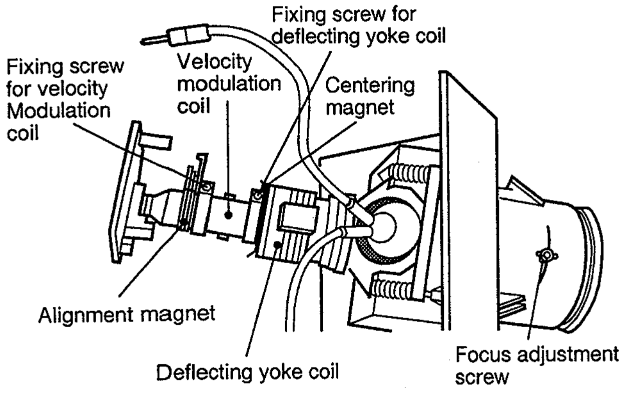
(1) Press ADJUST ➡ TEST ➡ STAND-ARD keys, and display "DIGITAL MUTE" on the screen.

(2) Loosen the screw securing the deflecting yoke coil, and adjust by turning the deflecting yoke coil so that a line on the screen becomes horizontal.

(3) After adjusting R, G, B, secure the screw for the deflecting yoke coil.


Horizontal

2-1-3. Alignment Magnet Adjustment


Fixing screw for deflecting yoke coil
Fixing screw for velocity Modulation coil
Velocity modulation coil
Centering magnet
Alignment magnet
Deflecting yoke coil
Focus adjustment screw

Input signal : TEST 1 (Cross Pattern)

Adjusting point : Alignment Magnet (2 poles)

Notes :

- CRT has three pairs (for 2 poles, 4 poles and 6 poles) of alignment magnet which one pair consists of 2 magnets.
- Alignment magnet adjustment is performed only with 2 pole magnets (marked with "P"). It is not necessary for 4 pole and 6 pole magnets to adjust.
- Before performing the alignment magnet adjustment, perform the centering adjustment. (Refor to 2-1-4.)

(1) Input NTSC signal and display TEST 1 (Cross pattern) signal.

(2) Select a color to adjust by switching CRT ON/OFF of remote controller.

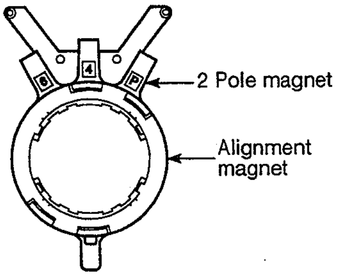
(3) Adjust the focus VR on the focus pack by turning counterclockwise from the position of best focus, so that the vertical/horizontal lines become in out of focus and in blurred wider line with the base bright center line.

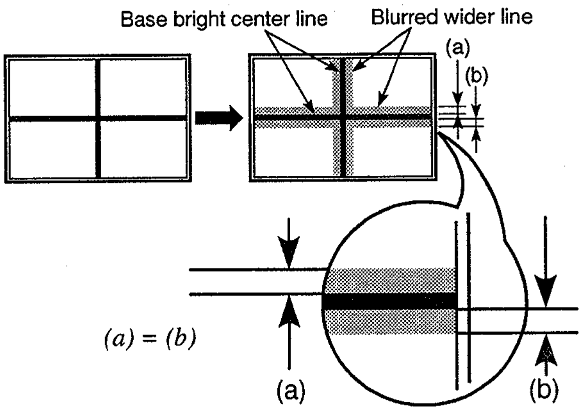
(4) Adjust by turning the two pole magnets (marked with "P") so that both (a) and (b) ends of blurred line width in vertical and horizontal become symmetrical to the base bright center line ((a) = (b)).

(Rerform this adjustment perform with either each magnet or both two magnet.)

Note:

When the focus VR is turned, the center of cross pattern may be moved. In this case, also perform the center of cross pattern matching when adjusting with the alignment magnets.


P
4
P
2 Pole magnet
Alignment magnet


Base bright center line
Blurred wider line
(a)
(b)
(a) = (b)
(a)
(b)

(5) After performing the alignment magnet adjustment, secure the magnet lightly with glue and adjust the focus VR to obtain just focus.

(6) Perform the centering adjustment again after the adjustment above.

(7) Repeat above adjustment procedure (item (2) - (7)) for the adjustment of other colors.

2-1-4. Centering Adjustment

Input signal : RETMA

Adjusting point : L442

(1) Input RETMA signal.

(2) Press ADJUST ➡ TEST ➡ STANDARD keys, and display "DIGITAL MUTE" on the screen.

(3) Set the value on the screen to 120 with PHASE ➡ ▲ ▼ keys.

(4) Set the value on the screen to 19 with PHASE ➡ ◀ ▶ keys.

(5) Press G.SEL key, and select Green.

(6) Adjust the centering magnet for (G) so that the center of RETMA signal and the center of the screen are agreed.

(7) Set the value on the screen to 255 with

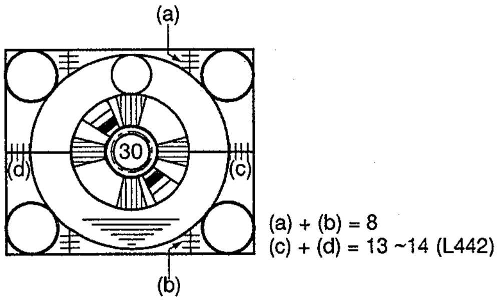
SIZE ➡ ◀ ▶ keys, and adjust

L442 (H.SIZE) so that the total scale of both left (d) and right (c) sides of RETMA signal becomes 13~14.

(8) Adjust SIZE ➡ ▲ ▼ and

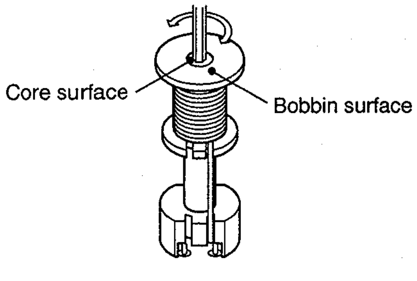
LINEAR ➡ ▲ ▼ keys so

that the scale of both upper (a) and lower (b) sides become 4, and so that the center of RETMA signal and the screen center are agreed.



Note:

If the total scale is not satisfied with (c) + (d) = 13 ~ 14, adjust the L442 core so that its top surface becomes flush with the top of the bobbin surface.



(9) Display the picture of Red and Blue on the screen by

selecting R.SEL and B.SEL keys.

(10) Adjust the centering magnet for (R) and (B) so that the center of RETMA signal and the screen center are agreed.

- In case of no RETMA signal, adjustment will be performed with the following procedure.

Input signal : NTSC, TEST 3
(dense cross hatch)

Adjusting point : L442

(1) Input the NTSC signal.

(2) Press ADJUST ➡ TEST ➡ STAND-ARD

keys, and display "DIGITAL MUTE" on the screen.

(3) Display the built-in TEST 3 signal (dense cross

hatch) by pressing TEST key.

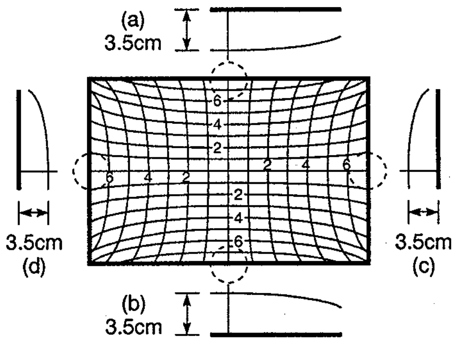
(4) Select (G) signal by pressing G.SEL key.

(5) Turn the centering magnet so that the screen center and the center of TEST signal are agreed.

(6) Adjust SIZE ➡ ▲ ▼ and

LINEAR ➡ ▲ ▼ keys.

Adjust them so that the screen center and the center of TEST signal are agreed, and the upper/lower edge portions (a) (b) are set as shown in figure below.



(7) Set the value to 255 by pressing

SIZE ➡ ◀ ▶ keys, and adjust

L442 so that the left and right edge portions (c) (d) of the screen are set as shown in the figure.

(If the result of (c) (d) shown in the figure is not obtained by adjusting L442, adjust the L442 core so that its top surface becomes flush with the top of the bobbin surface.)

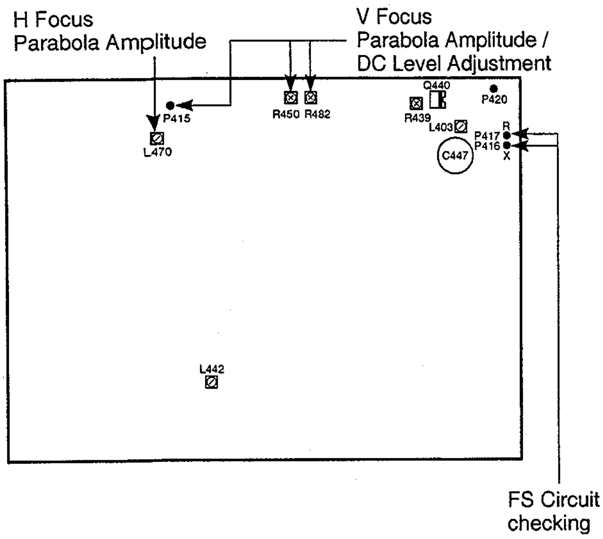
(8) Display the picture of each Red and Blue on the

screen by pressing R.SEL and B.SEL keys.

(9) Adjust the centering magnet for "R" and "B" so that the center of TEST signal and the screen center are agreed.

2-2. Circuit Adjustment

2-2-1. Deflection / High Voltage (DEF / HV) PC Board



< **Deflection / High Voltage PC Board** >

Location No.	Part Name	Type
T461	Fly-back Transformer	TFB5070AN
D424	Zener Diode	μPC574J
T421	Transformer	TPC2026
Q441	Transistor	2SC2655-Y
Q440	IC	TA75458P
R431	Resistor	91kΩ + 1%
R438	Resistor	24kΩ + 2%
R440	Resistor	5.1kΩ + 2%
R439	VR	2kΩ

Note:

Be sure to check the following two items when replacing the parts shown above, since X-RAY value may exceed the rating value due to fluctuation of high voltage.

1) High Voltage Circuit

Test point : FBT Anode
Test equipment : High Voltage Meter
Adjusting point : ———

(1) Disconnect the anode cable of FBT, and connect a high voltage meter between the contact point of FBT and the anode cable.

(2) Turn the power ON, and set the BRIGHTNESS and the CONTRAST to the minimum (no beam voltage).

(3) Make sure that the high voltage value is less than 32.0kV when the beam voltage is set to the minimum.

(4) Make sure that the high voltage value does not exceed the limit value 32.0kV while the BRIGHTNESS is adjusted from the maximum to the minimum setting.

2) Checking FS Circuit (D471, D473, D475, D476, Q451, Q452, Q471)

(1) Input the NTSC signal.

(2) Make a short circuit between the test pins R and X with a jumper wire temporarily.

(3) The raster will be eliminated.

(4) Make sure that the raster has been still eliminated even after removing the jumper wire if the FS circuit operates properly.

(5) The FS circuit will be reset waiting for more than 5 sec. after turning the power OFF, and the raster appears when turning the power ON again.

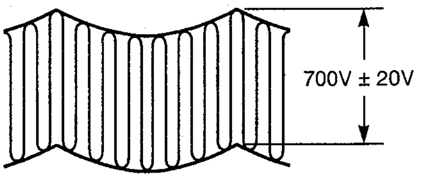
3) H Focus Parabola Amplitude

Test point : P415
Test equipment : Oscilloscope
Adjusting point : L470

(1) Input the NTSC signal.

(2) Connect the oscilloscope to P415 and ground. (Probe for the oscilloscope = 100 : 1)

(3) Adjust L470 so that the amplitude between positive and negative becomes 700V ± 20V.



4) V Focus Parabola Amplitude / DC Level

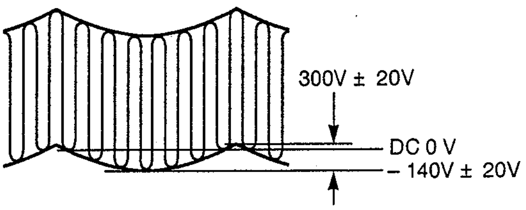
Test point : P415
Test equipment : Oscilloscope
Adjusting point : R450, R482

(1) Input the NTSC signal.

(2) Connect the oscilloscope to P415 and ground. (Probe for the oscilloscope = 100 : 1)

(3) Adjust R450 so that the amplitude becomes 300V ± 20V.

(4) Adjust R482 so that the DC level becomes –140 ± 20V.



5) H Width, V Size and V Linearity

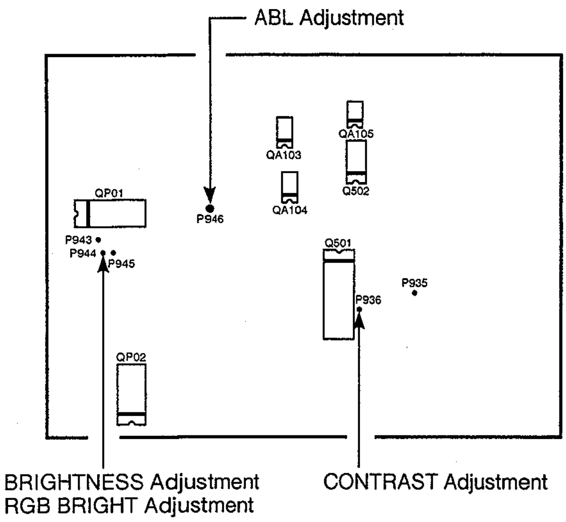
This adjustment procedure is same as that for centering adjustment. Follow the procedure in item 2-1-3.

2-2-2. Video Circuit

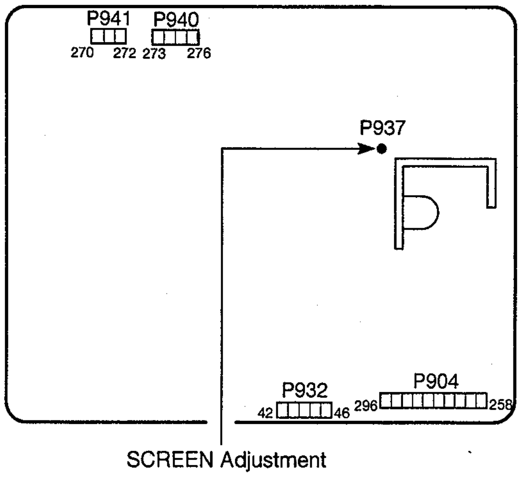
- The setting of the control panel is performed as follows unless otherwise specified.

  INPUT .... VIDEO
  WHITE BAL 1
  MULTI .... OFF
  ABL COMBI .... OFF

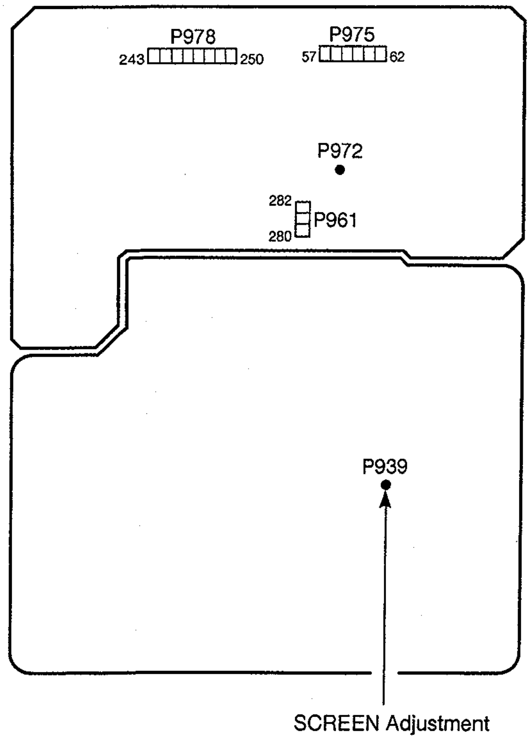
- ☐ ➡ shows a key operation of the remote controller.
- The adjustment is performed with ▲ ▼ keys of the remote control unless otherwise specified.


ABL Adjustment
QA105
QA103
Q502
QA104
QP01
P946
P943
P944
P945
Q501
P935
P936
QP02
BRIGHTNESS Adjustment
RGB BRIGHT Adjustment
CONTRAST Adjustment

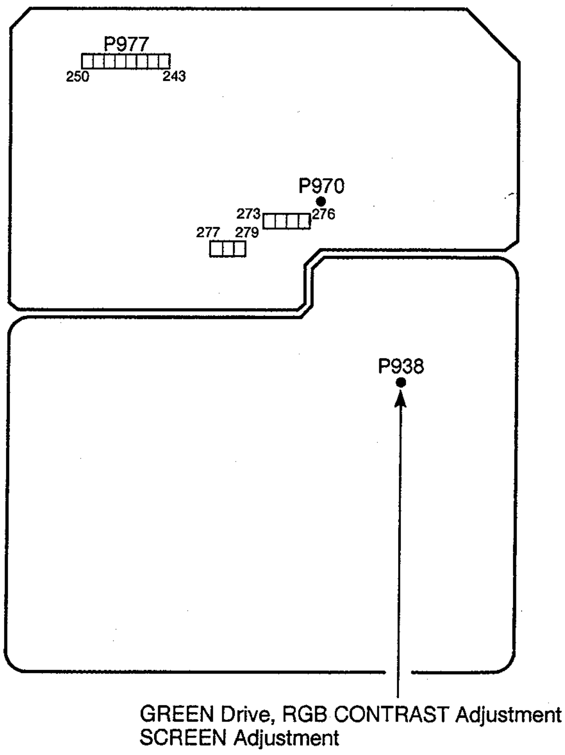
Video PC Board


P941
P940
270
272
273
276
P937
P932
P904
42
46
296
258
SCREEN Adjustment

CRT Drive (R) PC Board
< Bottom View >


P978
243
250
P975
57
62
P972
282
P961
280
P939
SCREEN Adjustment

CRT Drive (B) PC Board
< Bottom View >


P977
250
243
P970
273
276
277
279
P938
GREEN Drive, RGB CONTRAST Adjustment
SCREEN Adjustment

CRT Drive (G) PC Board
< Bottom View >

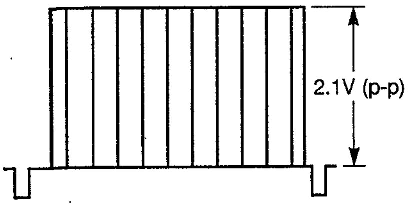
1) CONTRAST Adjustment

Test point : P936 (TP501)
Test equipment : Oscilloscope
Input signal : Cross hatch

(1) Select MO.SW : Y by pressing ADJUST ➡ SERVICE ➡ 4 keys.

(2) Adjust ADJUST ➡ CONTRAST ➡ ▲ ▼ keys so that the amplitude becomes 2.1V (p-p).

(3) Press WRITING key.



2) TINT, COLOR Adjustment

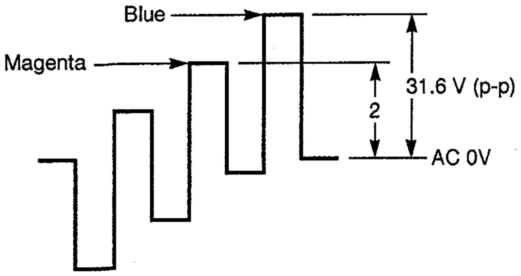
Test point : P936 (TP501)
Test equipment : Oscilloscope
Input signal : Color bar

(1) Select MO.SW : B-Y by pressing ADJUST ➡ SERVICE ➡ 4 keys.

(2) Adjust ADJUST ➡ TINT ➡ ▲ ▼ keys so that the ratio of Blue and Magenta becomes 3 : 2.

(3) Adjust COLOR ➡ ▲ ▼ keys so that Blue becomes 1.6V (p-p).

(4) Press WRITING key.

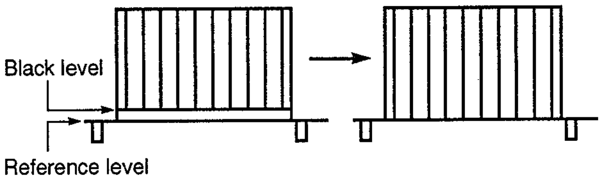

Blue
Magenta
3
1.6 V (p-p)
2
AC 0V

3) BRIGHT Adjustment

Test point : P944
Test equipment : Oscilloscope
Input signal : Cross hatch

(1) Adjust ADJUST ➡ BRIGHT ➡ ▲ ▼ keys so that the black level signal is overlapped with the reference level signal.

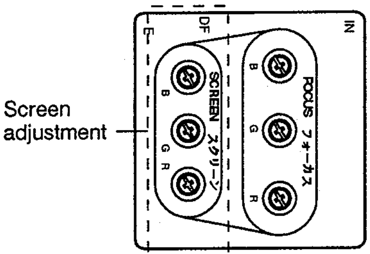
(2) Press WRITING key.


Black level
Reference level

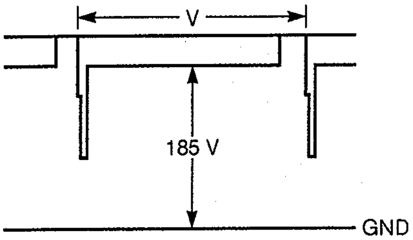
4) Screen Adjustment

Test point : P937 (R), P938 (G), P939 (B)
(each CRT drive PC Board)
Test equipment : Oscilloscope
Input signal : No signal
Adjusting point : VR in the focus pack

(1) Adjust each variable resistor of the focus pack so that the black level of each (R), (G), (B) becomes 185V (DC).


Screen adjustment
DF
SCREEN スクリーン
FOCUS フォーカス
IN
B
G
R

< Focus pack >



5) Green Drive Adjustment

Test point : P938
(CRT drive (G) PC Board)
Test equipment : Oscilloscope
Input signal : Cross hatch

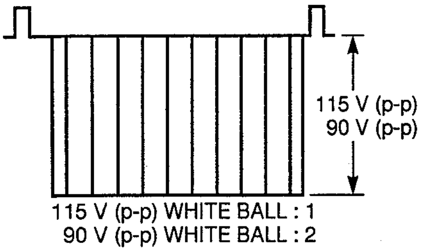
(1) Adjust ADJUST ➡ TEST ➡ DRIVE ➡ G.SEL ➡ ▲ ▼ keys so that the amplitude becomes 115V (p-p).

(2) Press WRIT-ING key.

(3) Set the WHITE BAL Switch to position 2, and also adjust them so that the amplitude becomes 90V (p-p).

(4) Press WRIT-ING key.

(5) Set the WHITE BAL Switch to position 1 after completing the adjustment.



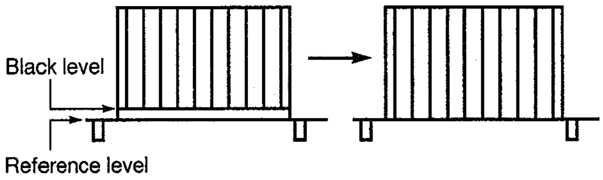
6) RGB Adjustment

< RGB BRIGHT Adjustment >

Test point : P944
Test equipment : Oscilloscope
Input signal : Cross hatch

(1) Adjust RGB ➡ ADJUST ➡ BRIGHT ➡ ▲ ▼ keys so that the black level is overlapped with the reference level.

(2) Press WRIT-ING key.

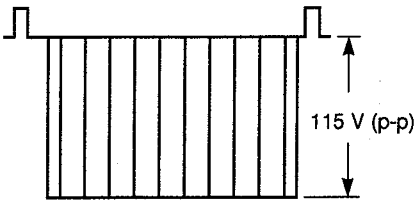


<RGB CONTRAST Adjustment>

Test point : P 938
(CRT drive (G) PC Board)
Test equipment : Oscilloscope
Input signal : Cross hatch

(3) Adjust RGB ➡ ADJUST ➡ CON-TRAST ➡ ▲ ▼ keys so that the amplitude becomes 115V (p-p).

(4) Press WRIT-ING key.



7) WHITE BALANCE

- The adjustment is performed with both WHITE BAL 1 and WHITE BAL 2 (Control panel) modes.
- Adjust WHITE BALANCE by repeating both cutoff adjustment and drive adjustment, until both values become shown in Table below.

< CUT OFF Adjustment >

Test point : ————
Test equipment : W / B Checker (MINOLTA TV-2130)
Input signal : White raster (20%)

(1) Adjust CUT OFF { R.SEL / B.SEL } ➡ ▲ / ▼ keys

so that the values become shown below.

Setting Position of WHITE BAL	Adjustment Value of W/B Checker	
	X	Y
1	0.313	0.329
2	0.423	0.399

(2) The drive adjustment is performed as follows.

Note:

If there are no 20% white raster signal and W/B checker, adjust it with the following procedure.

- Input the 100% white raster signal.
- Adjust CON-TRAST ➡ ▲ ▼ keys so that the contrast data value displayed on the screen of the main unit becomes 016.

< DRIVE Adjustment >

Test point : ————
Test equipment : W/B Checker (MINOLTA TV-2130)
Input signal : White Raster (50%)

(1) Adjust DRIVE ➡ { R.SEL / B.SEL } ➡ ▲ / ▼ keys so that the values become shown below.

Setting Position of WHITE BAL	Adjustment Value of W/B Checker	
	X	Y
1	0.313	0.329
2	0.423	0.399

(2) Make sure that both cutoff adjustment and drive adjutment are completed.

(3) Press WRIT-ING key.

Note:

If there are no 50% white raster signal and W/B checker, adjust it with the following procedure.

- Input the 100% white raster signal.
- Adjust CON-TRAST ➡ ▲ ▼ key so that the contrast data value displayed on the screen of the main unit becomes 054.

8) ABL Adjustment

Test point : P946
Test equipment : Digital voltmeter
Input signal : White raster (100%)

(1) Connect the digital voltmeter to P946.

(2) Adjust ADJUST ➡ ABL ➡ ▲ ▼ keys so that the value becomes 5.2 V.

(3) Press WRIT-ING key.

2-3. Convergence Adjustment

- The convergence circuit consists of a digital system, and each adjustment for a compensation can be performed independently.

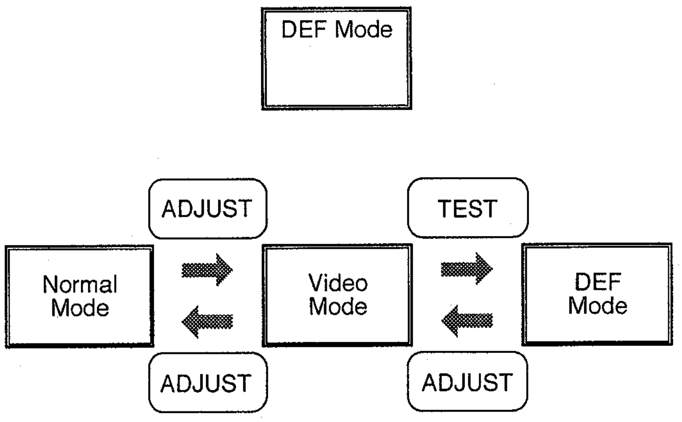
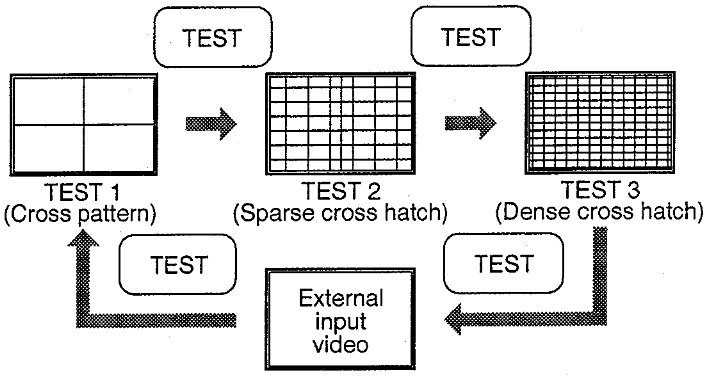
NTSC...................... Horizontal 8 items
Vertical 7 items
PAL .... Horizontal 8 items
Vertical 8 items

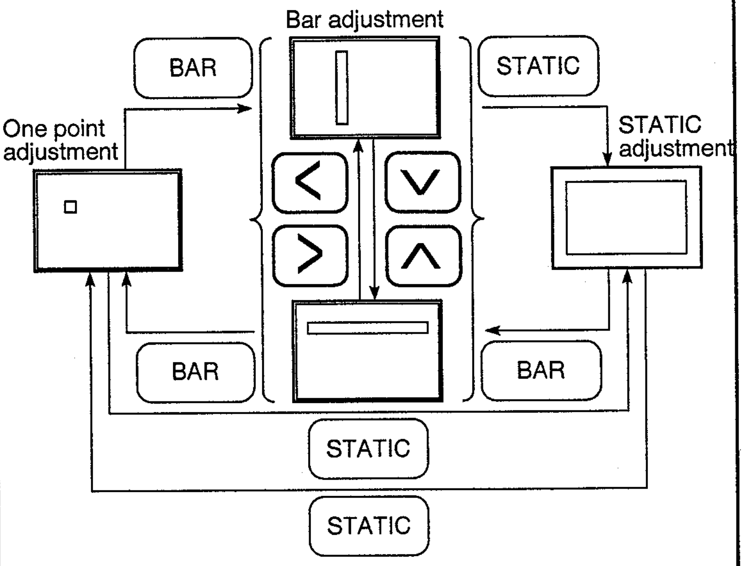
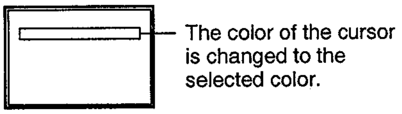
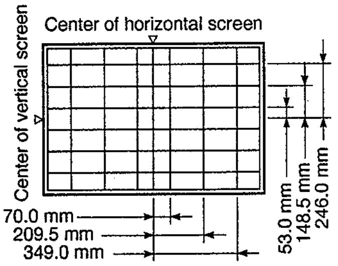
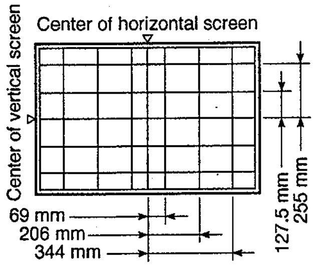
- Remote controller (CT-9802) is used.
- ▭ ➡ shows a key operation of the remote controller.

Preparation

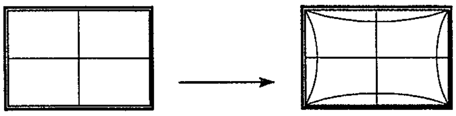
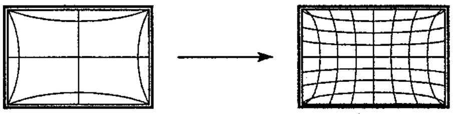
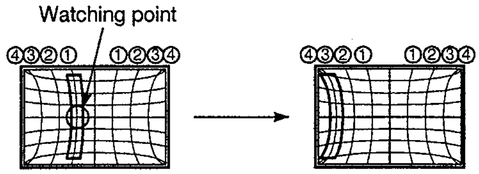
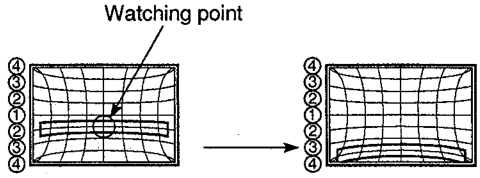
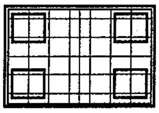
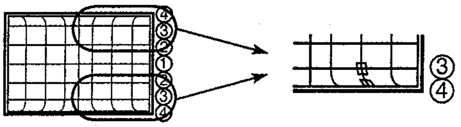
- When readjusting the convergence after replacing the parts (Deflecting yoke, Coupling CRT, Lens) around the CRT, perform it after the adjustments described in the item 2-1. CRT Adjustment (2-1-1. Focus Adjustment of R. G. B lens, 2-1-2. TILT Adjustment, 2-1-3. Centering Adjustment).
- If excessive convergence error occurs after repairing the convergence circuit or replacing a part of convergence, perform a rough adjustment first, then perform the normal adjustment process.

Adjustment Process

Pro-cess	Adjustment Procedure	Display and Remarks
1	• Connect the remote controller terminal to the rear terminal of the unit. • Select DEF mode by pressing ADJUST ➡ TEST keys.	**< Mode Shifting >**  DEF Mode ADJUST TEST Normal Mode Video Mode DEF Mode ADJUST ADJUST
2	• Select the built-in test pattern depending on a kind of adjustment. • Whole screen .... TEST 1 (STATIC mode) • Normal condition......... TEST 2, TEST 3 (One point adjustment / Bar adjustment) • Outer corner screen...... TEST 3 (One point adjustment)	**< Mode Shifting >**  TEST TEST TEST 1 (Cross pattern) TEST 2 (Sparse cross hatch) TEST 3 (Dense cross hatch) TEST TEST External input video

Pro-cess	Adjustment Procedure	Display and Remarks
3	• To select the adjustment mode, move the cursor by pressing [∧], [∨], [<], [>] keys.	**< Mode Shifting >**  Bar adjustment BAR STATIC One point adjustment STATIC adjustment BAR BAR STATIC STATIC **< A cursor displays in the screen >**
4	• Select the color to adjust with [R.SEL], [G.SEL], [B.SEL] keys.	 The color of the cursor is changed to the selected color. **< For example : Bar adjustment >**
5	• Adjust [◀] [▶] [▲] [▼] keys so that the dimension on the screeen is same as the specification shown in the figure.	**< Reference dimension >** **PAL 7% Over scan Sparse cross hatch**  Center of horizontal screen Center of vertical screen 70.0 mm 209.5 mm 349.0 mm 53.0 mm 148.5 mm 246.0 mm Distance in dense cross hatch, (Horizontal : 70 mm) (Vertical : 53 mm) **NTSC 7% Over scan Sparse cross hatch**  Center of horizontal screen Center of vertical screen 69 mm 206 mm 344 mm 127.5 mm 255 mm Distance in dense cross hatch, (Horizontal : 69 mm) (Vertical : 42.5 mm) The adjustment value in factory setting is 7% Over scan with input signal, and it is the reference value.
6	• Perform the convergence adjustment at the whole screen repeating the process items 3,4, and 5 above. • Store the adjustment data by pressing [WRIT-ING] key after completing the adjustments.	**Note:** The adjusted data will be eliminated if turning normal mode or turning the power off without pressing [WRIT-ING] key.

Convergence rough adjustment

Process	Adjustment Procedure	Display and Remarks
1	• Select TEST 1 (Cross pattern) by pressing ADJUST ➡ TEST ➡ STATIC keys. • Select Green color by pressing G.SEL and adjust ◀ ▶ ▲ ▼ keys so that the cross pattern becomes center in the screen.	STATIC  A cursor displays in the screen by STATIC selecting.
2	• Select TEST 2 (Sparse cross hatch) by pressing TEST key.	TEST 
3	• Select the vertical bar mode by pressing BAR ➡ < > keys. • Adjust ◀ ▶ ▲ ▼ keys watching the cursor center so that the dimension is agreed with the reference.	 Adjust < > keys in the order of to .
4	• Select the horizontal bar mode by pressing BAR ➡ ∧ ∨ keys. • Adjust ◀ ▶ ▲ ▼ keys watching the cursor center so that the dimension is agreed with the reference.	 Adjust ∧ ∨ keys in the order of to .
5	• Select one point mode by pressing BAR key. • Move the cursor to four corners of the screen, and perform the convergence adjustment so that the lines do not bend excessively.	 Four points balance adjustment
6	• Repeat the adjustment of two points which are upper and lower portions on the screen, so that the dimension becomes fit with the reference.	 Repeat to adjust it at the two points .

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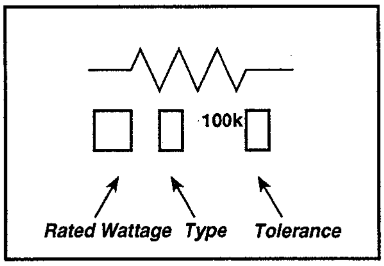
SECTION 3
SERVICING DIAGRAMS

PRECAUTIONS FOR PART REPLACEMENT

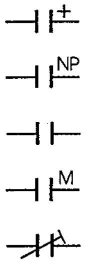
- * In the schematic diagram, parts marked ⚠ (ex. ⚠ F801) are critical part to meet the safety regulations, so always use the parts bearing specified part codes (SN) when replacing them.
- * Using the parts other then those specified shall violate the regulations, and may cause troubles such as operation failures, fire, etc.

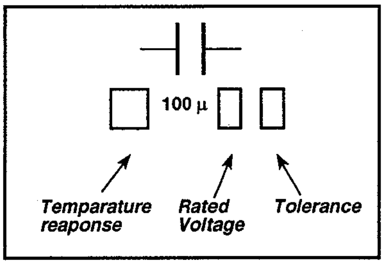
SOLID RESISTOR INDICATION

Unit	None • • • ý k • • • ký M • • • Mý
Tolerance	None • • • ± 5 % B • • • ± 0.1 % C • • • ± 0.25 % D • • • ± 0.5 % F • • • ± 1 % G • • • ± 2 % K • • • ± 10 % M • • • ± 20 %
Rated Wattage	(1) Chip Parts None • • • 1/16 W (2) Other Parts None • • • 1/6 W Other then above, described in the Circuit Diagram
Type	None • • • Carbon film S • • • Solid R • • • Oxide metal film W • • • Metal film W • • • Cement RF • • • Fusible



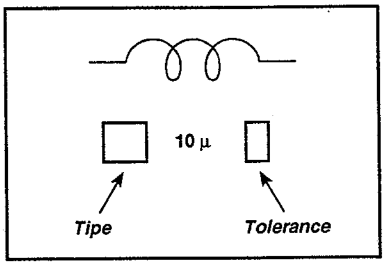
CAPACITANCE INDICATION

Symbol	 • • • Electrolytic, Special electrolytic • • • Non polarity electrolytic • • • Ceramic, plastic • • • Film • • • Trimmer
Unit	None • • • F µ • • • µF p • • • pF
Rated voltage	None • • • 50 V For other than 50 V and electrolytic capacitors, described in the Circuit Diagram.
Tolerance	(1) Ceramic, plastic, and film capacitors of which capacitance are more than 10 pF. None • • • ± 5 % or more B • • • ± 0.1 % C • • • ± 0.25 % D • • • ± 0.5 % F • • • ± 1 % G • • • ± 2 % (2) Ceramic, plastic, and film capacitors of which capacitance are 10 pF or less. None • • • more than ± 5 pF B • • • ± 0.1 pF C • • • ± 0.25 pF (3) Electrolytic,Trimmer Tolerance is not described.
Temperature characteristic (Ceramic capacitor)	None • • • SL For others, temperature characteristics are described. (For capacitors of 0.01 µF and no indications are described as F.)



INDUCTOR INDICATION

Unit	None • • • H µ • • • µH m • • • mH
Tolerance	None • • • ± 5 % B • • • ± 0.1 % C • • • ± 0.25 % D • • • ± 0.5 % E • • • ± 1 % G • • • ± 2 % K • • • ± 10 % M • • • ± 20 %
Type	PL • • • Peaking For others, model name is described.



WAVEFORM AND VOLTAGE MEASUREMENT

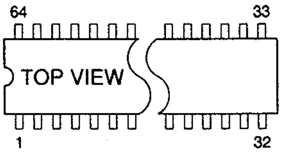
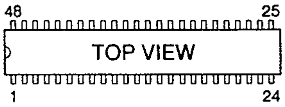
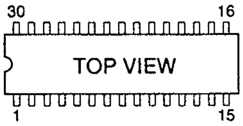
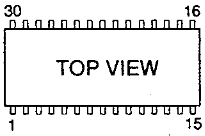
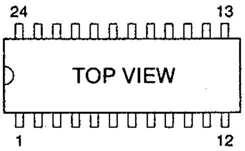
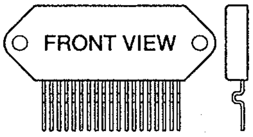
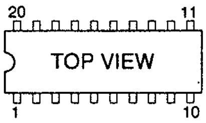
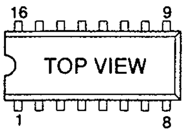
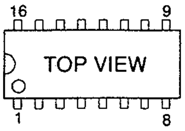
* Measurement of waveform and voltage at each section in the color circuits was conducted with sufficient service color bar signal being received and reproduced in normal conditions.

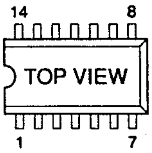
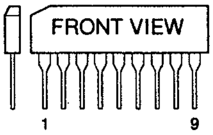
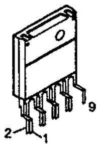
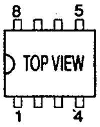
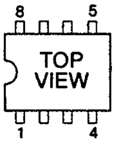
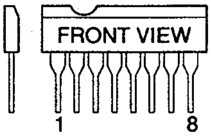
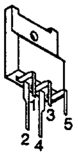
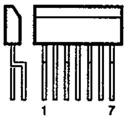
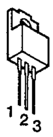
* Waveforms and voltage values for the remaining circuit were measured with a broadcasting signal normally received, so they may vary slightly according to the programs being received. Use them as a measure for servicing.

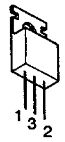
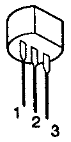
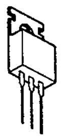
* All voltage values except the waveforms are expressed in DC and measured by a digital voltmeter.

1. PART CONFIGURATION AND THEIR SYMBOLS

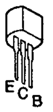
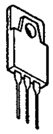
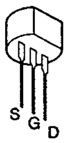
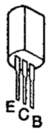
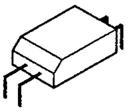
1.ICs

NAME	SHAPE
M38002SSP TA8857N	 64 33 TOP VIEW 1 32
CXA1024S	 48 25 TOP VIEW 1 24
M51387P TA8772AN	 30 16 TOP VIEW 1 15
M52036SP	 30 16 TOP VIEW 1 15
DAC8840FP	 24 13 TOP VIEW 1 12
STK392-020	
UPD6453CY514 TA8814N TA1200N	 20 11 TOP VIEW 1 10
MC14053BCP,TC74HC590AP TC74HC165AP MC14052BCP TA8859AP TC4538BP TC74HC125AP	 16 9 TOP VIEW 1 8
MAX232CPE FA5331P	 16 9 TOP VIEW 1 8

NAME	SHAPE
TC74HC04AP TC74HC14AP TC74HC4066AP	 14 8 TOP VIEW 1 7
AN5862K TA75458S TA78L009AP	 FRONT VIEW 1 9
STR-S6708	
M6M80041P	 8 5 TOP VIEW 1 4
TA7555P TA75358CP TA75458P TA75558P	 8 5 TOP VIEW 1 4
MM1096BS	 FRONT VIEW 1 8
L78MR05 SI-3050C LM2991T	
2SC3381-BL	
UPC2412HF TA78009AP	

NAME	SHAPE
MCT7815BT TA78012AP	
PST523D	
TA78005AP	

2.TRANSISTORs

2SA933S,2SC2878-A 2SA1206,2SC3112-B RN1002,2SA562TM-Y RN1003,2SA1320 2SC1815 Y,2SC380TM-Y 2SC2120-Y,2SC752(G)TM	
2SK525 2SK530	
2SK30ATM-Y	
2SC2229-Y,2SA1321 2SC2230-Y 2SC2655-Y 2SC3334 2SA949-Y 2SA1020-Y	
S1854	

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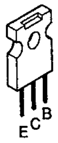
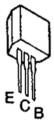
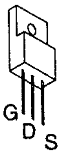
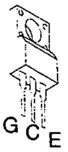
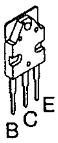
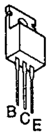
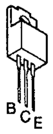
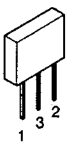
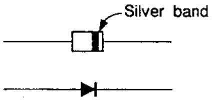
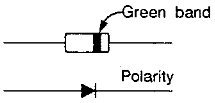
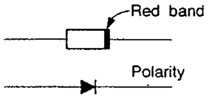
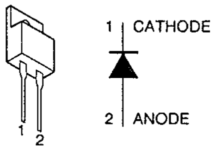
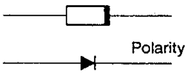
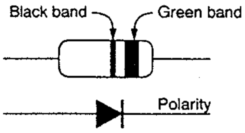
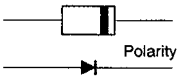
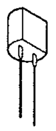
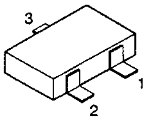
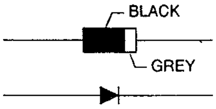
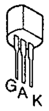
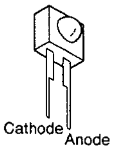
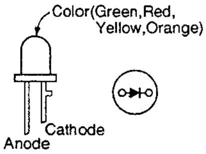
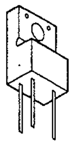
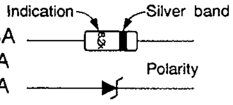
2SC3619	
2SC1740S RN1202 RN1203 RN1204 RN2202	
2SK894	
2SC3893A	
2SC3907-O TLP621 2SD1090 2SA1516-O	
2SC3148 2SA1012-Y 2SA1306-Y 2SC1569	
2SC3852 2SC3298A-Y 2SA1015-Y(TE	

3.DIODEs

1S1887	

NAME	SHAPE
AL01Z R2M AK04 TVR-1B	 Silver band
1SS131 1SS176(FA)	 Green band Polarity
RG2A	 Red band Polarity
FML-G16S	 1 CATHODE 2 ANODE 1 2
RD18ESA	
1SS178(FA)	 Black band Green band Polarity
RK34 RU1P RL4Z TVR-2D 1S1887AFA	
UPC574J	
RBV-606	 1:NC 2:Anode 3:Cathode

NAME	SHAPE
EU2A	
SF0R3G42	
MBG4361F	 Cathode Anode
TLG114A	 Color(Green,Red, Yellow,Orange) Cathode Anode
FML-G12S	
RD6.2E,UZ3.0BSB,UZ6.2BSB,UZ18BSB 1SS133,UZ3.3BSA,UZ6.8BSB,UZ22BSB UZ9.1BSB,UZ4.7BSA,UZ7.5BSA,UZ24BSA UZ12BSB,UZ4.7BSB,UZ8.2BSB,UZ36BSA UZ2.0BSA,UZ5.1BSB,UZ10BSB,UZ39BSA UZ2.0BSB,UZ5.6BSB,UZ15BSB	 Indication Silver band Polarity

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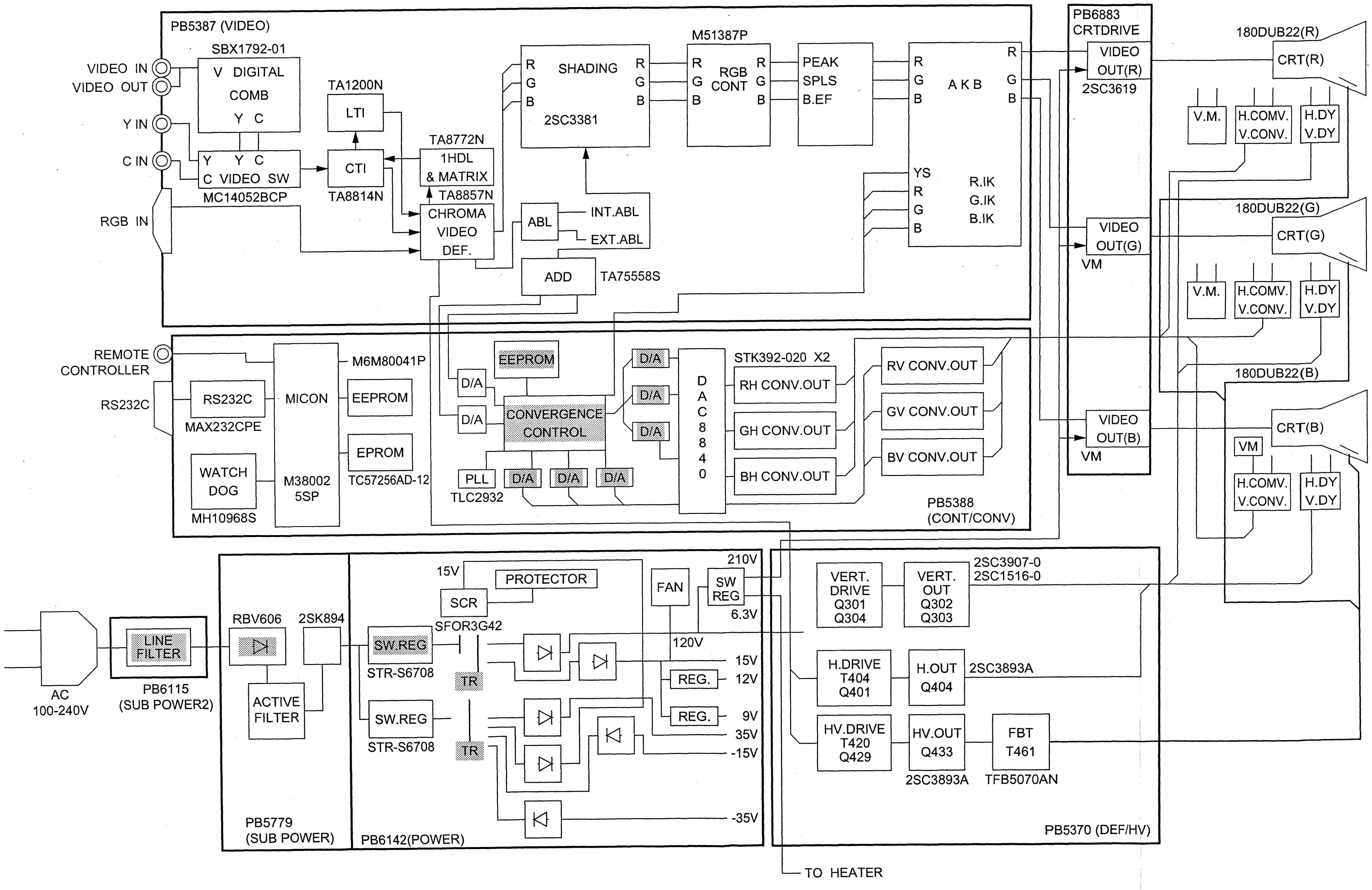
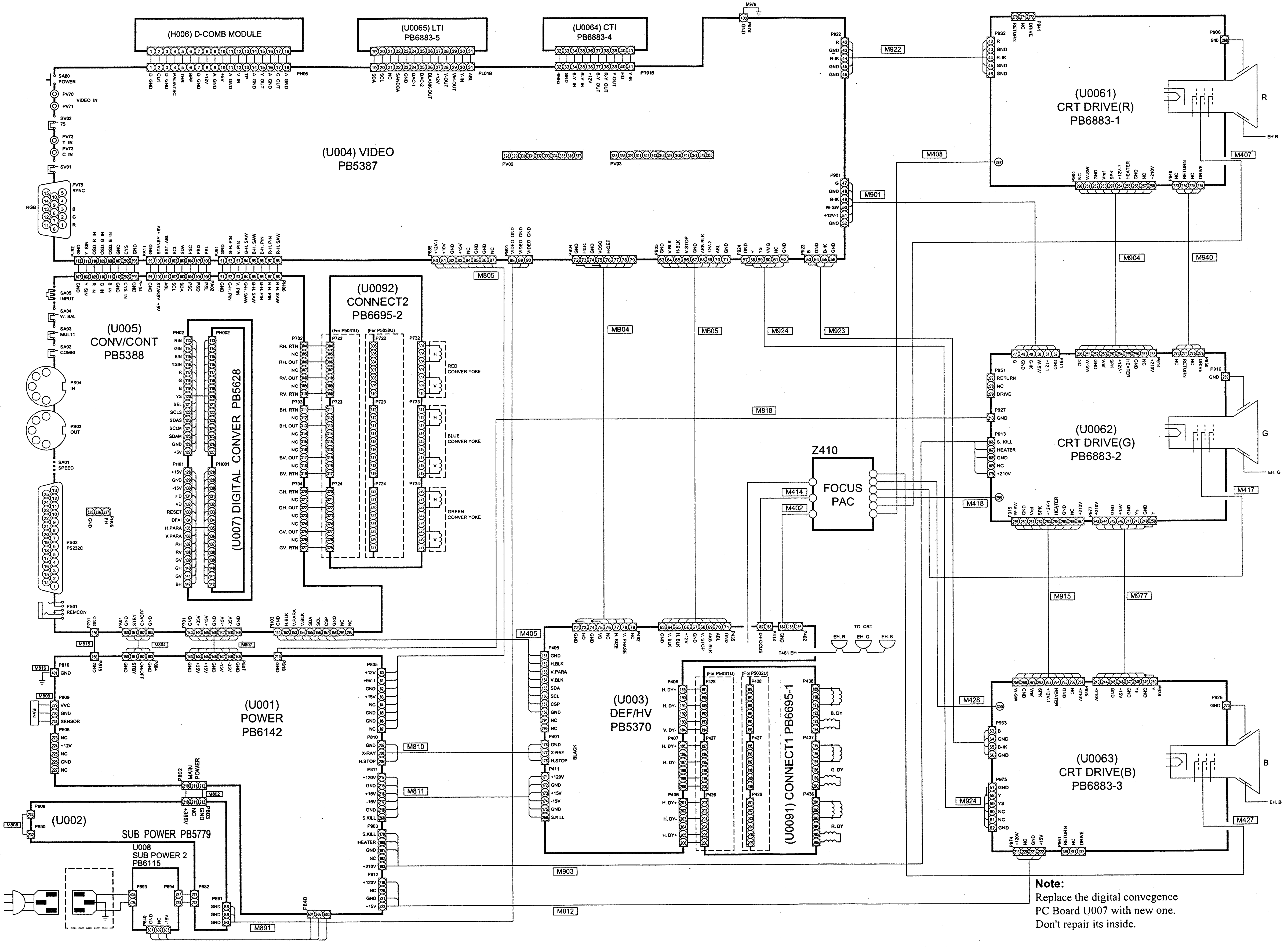
2. WIRING BLOCK DIAGRAM


PB5387 (VIDEO)
VIDEO IN
VIDEO OUT
Y IN
C IN
RGB IN
SBX1792-01
V DIGITAL COMB Y C
Y Y C
C VIDEO SW
MC14052BCP
TA1200N
LTI
CTI
TA8814N
TA8772N
1HDL & MATRIX
TA8857N
CHROMA VIDEO DEF.
SHADING
R G B
2SC3381
ABL
INT.ABL
EXT.ABL
ADD
TA75558S
M51387P
RGB CONT
PEAK SPLS B.EF
A K B
YS R G B
R.IK G.IK B.IK
PB6883 CRTDRIVE
VIDEO OUT(R)
2SC3619
VIDEO OUT(G)
VM
VIDEO OUT(B)
VM
180DUB22(R)
CRT(R)
V.M.
H.COMV. V.CONV.
H.DY V.DY
180DUB22(G)
CRT(G)
V.M.
H.COMV. V.CONV.
H.DY V.DY
180DUB22(B)
CRT(B)
VM
H.COMV. V.CONV.
H.DY V.DY
REMOTE CONTROLLER
RS232C
RS232C
MAX232CPE
WATCH DOG
MH10968S
MICON
M38002 5SP
M6M80041P
EEPROM
EPROM
TC57256AD-12
EEPROM
D/A
D/A
CONVERGENCE CONTROL
PLL
TLC2932
D/A
D/A
D/A
D/A
D/A
D/A
D A C 8 8 4 0
STK392-020 X2
RH CONV.OUT
GH CONV.OUT
BH CONV.OUT
RV CONV.OUT
GV CONV.OUT
BV CONV.OUT
PB5388 (CONT/CONV)
AC 100-240V
LINE FILTER
PB6115 (SUB POWER2)
RBV606
2SK894
ACTIVE FILTER
PB5779 (SUB POWER)
15V
SCR
PROTECTOR
SFOR3G42
SW.REG
STR-S6708
TR
SW.REG
STR-S6708
TR
FAN
SW REG
210V
6.3V
120V
15V
REG.
12V
REG.
9V
35V
-15V
-35V
PB6142(POWER)
VERT. DRIVE Q301 Q304
VERT. OUT Q302 Q303
2SC3907-0
2SC1516-0
H.DRIVE T404 Q401
H.OUT Q404
2SC3893A
HV.DRIVE T420 Q429
HV.OUT Q433
2SC3893A
FBT T461
TFB5070AN
PB5370 (DEF/HV)
TO HEATER

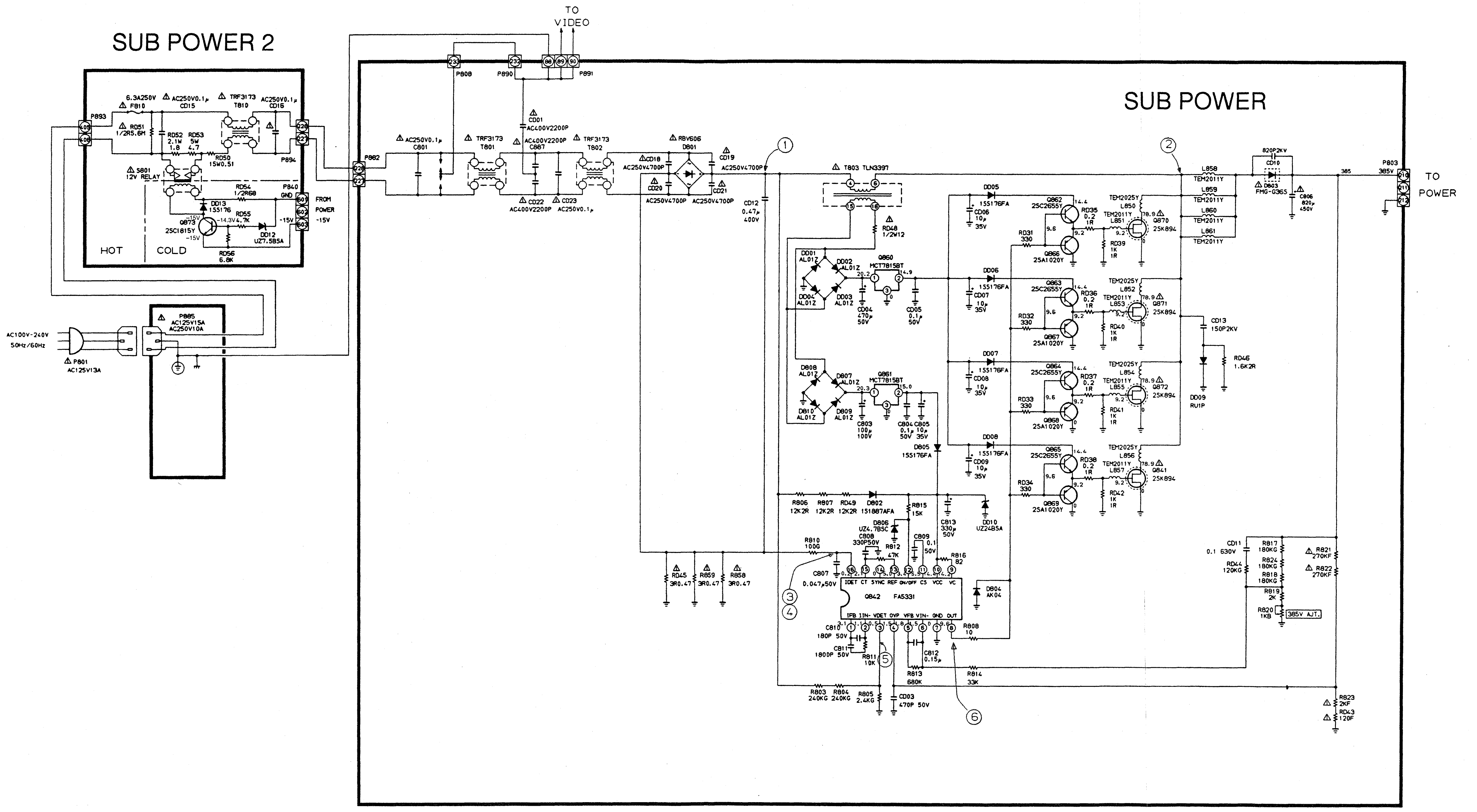
3. WIRING SCHEMATIC DIAGRAM

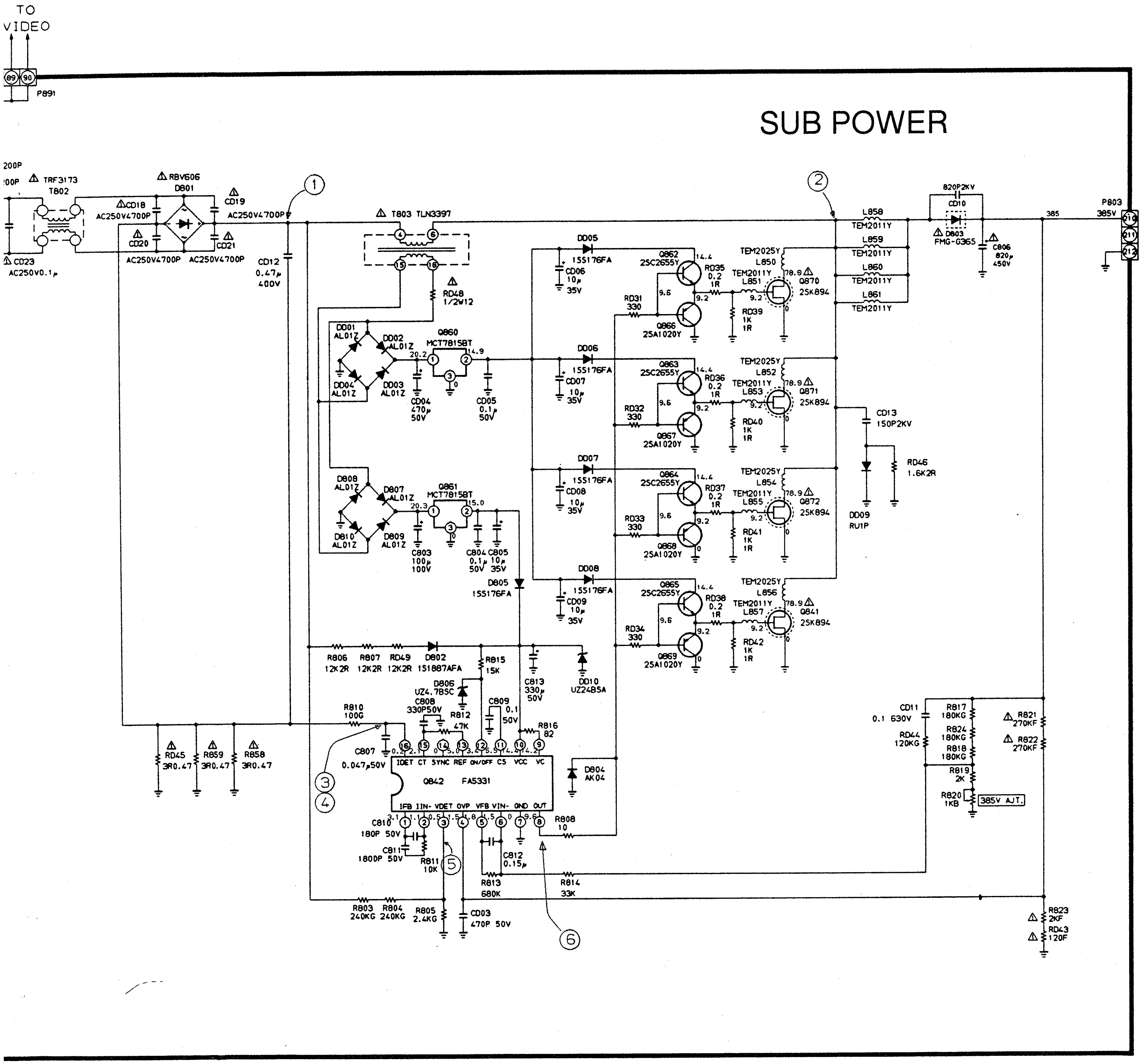

(H006) D-COMB MODULE
(U0065) LTI
PB6883-5
(U0064) CTI
PB6883-4
(U004) VIDEO
PB5387
(U0061)
CRT DRIVE(R)
PB6883-1
R
EH.R
(U0092)
CONNECT2
PB6695-2
RED CONVER YOKE
BLUE CONVER YOKE
GREEN CONVER YOKE
(U005)
CONV/CONT
PB5388
(U007) DIGITAL CONVER PB5628
(U0062)
CRT DRIVE(G)
PB6883-2
G
EH. G
Z410
FOCUS
PAC
(U001)
POWER
PB6142
(U003)
DEF/HV
PB5370
(U0091) CONNECT1 PB6695-1
B. DY
G. DY
R. DY
TO CRT
EH. R
EH. G
EH. B
T461 EH
(U0063)
CRT DRIVE(B)
PB6883-3
B
EH. B
(U002)
SUB POWER PB5779
U008
SUB POWER 2
PB6115
FAN
RGB
M922
M408
M407
M901
M805
M904
M940
MB04
M805
M924
M923
M818
M414
M402
M418
M417
M915
M977
M405
M815
M804
M807
M816
M809
M810
M811
M802
M808
M891
M903
M812
M428
M924
M427
M976

Note:
Replace the digital convegence PC Board U007 with new one. Don't repair its inside.

4. SCHEMATIC DIAGRAMS

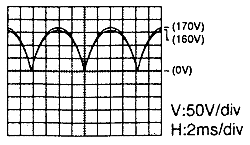
4-1. SUB Power Circuit


SUB POWER 2
SUB POWER
TO VIDEO
TO POWER
FROM POWER -15V
HOT
COLD
AC100V-240V 50Hz/60Hz
P801 AC125V13A
P885 AC125V15A AC250V10A
F810 6.3A250V
CD15 AC250V0.1μ
T810 TRF3173
CD16 AC250V0.1μ
RD51 1/2R5.6M
RD52 2.1W 1.8
RD53 5W 4.7
RD50 15W0.51
S801 12V RELAY
RD54 1/2R68
DD13 1SS176
Q873 2SC1815Y
RD55 4.7K
DD12 UZ7.5BSA
RD56 6.8K
P893
P894
P840 GND
P808
P890
P891
P882
C801 AC250V0.1μ
T801 TRF3173
CD01 AC400V2200P
C887 AC400V2200P
T802 TRF3173
CD22 AC400V2200P
CD23 AC250V0.1μ
D801 RBV606
CD18 AC250V4700P
CD19 AC250V4700P
CD20 AC250V4700P
CD21 AC250V4700P
CD12 0.47μ 400V
T803 TLN3397
RD48 1/2W12
DD01 AL01Z
DD02 AL01Z
DD03 AL01Z
DD04 AL01Z
Q860 MCT7815BT
CD04 470μ 50V
CD05 0.1μ 50V
DD08 AL01Z
DD07 AL01Z
DD09 AL01Z
DD10 AL01Z
Q861 MCT7815BT
C803 100μ 100V
C804 0.1μ 50V
C805 10μ 35V
D805 1SS176FA
DD05 1SS176FA
DD06 1SS176FA
DD07 1SS176FA
DD08 1SS176FA
CD06 10μ 35V
CD07 10μ 35V
CD08 10μ 35V
CD09 10μ 35V
Q862 2SC2655Y
Q863 2SC2655Y
Q864 2SC2655Y
Q865 2SC2655Y
Q866 2SA1020Y
Q867 2SA1020Y
Q868 2SA1020Y
Q869 2SA1020Y
RD31 330
RD32 330
RD33 330
RD34 330
RD35 0.2 1R
RD36 0.2 1R
RD37 0.2 1R
RD38 0.2 1R
RD39 1K 1R
RD40 1K 1R
RD41 1K 1R
RD42 1K 1R
L850 TEM2025Y
L851 TEM2011Y
L852 TEM2025Y
L853 TEM2011Y
L854 TEM2025Y
L855 TEM2011Y
L856 TEM2025Y
L857 TEM2011Y
Q870 2SK894
Q871 2SK894
Q872 2SK894
Q841 2SK894
L858 TEM2011Y
L859 TEM2011Y
L860 TEM2011Y
L861 TEM2011Y
CD10 820P2KV
D803 FMG-G36S
C806 820μ 450V
P803 385V
CD13 150P2KV
RD46 1.6K2R
DD09 RU1P
R806 12K2R
R807 12K2R
R049 12K2R
D802 1S1887AFA
R815 15K
D806 UZ4.7BSC
C808 330P50V
R812 47K
C809 0.1 50V
C813 330μ 50V
DD10 UZ24BSA
R810 100Ω
C807 0.047μ50V
R816 82
Q842 FA5331
IDET CT SYNC REF ON/OFF CS VCC VC
IFB IIN- VDET OVP VFB VIN- GND OUT
D804 AK04
C810 180P 50V
C811 1800P 50V
R811 10K
C812 0.15μ
R808 10
R813 680K
R814 33K
R803 240KG
R804 240KG
R805 2.4KG
CD03 470P 50V
RD45 3R0.47
R859 3R0.47
R858 3R0.47
CD11 0.1 630V
RD44 120KG
R817 180KG
R824 180KG
R818 180KG
R819 2K
R820 1KB
385V AJT.
R821 270KF
R822 270KF
R823 2KF
RD43 120F
①
②
③
④
⑤
⑥

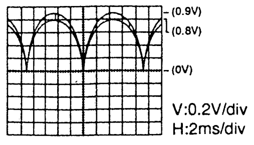

SUB POWER

TO VIDEO
P891
TRF3173
T802
RBV606
D801
CD18 AC250V4700P
CD19
AC250V4700P
CD20
CD21
AC250V4700P AC250V4700P
CD23 AC250V0.1μ
CD12 0.47μ 400V
①
②
T803 TLN3397
RD48 1/2W12
DD01 AL01Z
DD02 AL01Z
DD03 AL01Z
DD04 AL01Z
Q860 MCT7815BT
CD04 470μ 50V
CD05 0.1μ 50V
DD05 1SS176FA
DD06 1SS176FA
DD07 1SS176FA
DD08 1SS176FA
CD06 10μ 35V
CD07 10μ 35V
CD08 10μ 35V
CD09 10μ 35V
Q862 2SC2655Y
Q863 2SC2655Y
Q864 2SC2655Y
Q865 2SC2655Y
Q866 2SA1020Y
Q867 2SA1020Y
Q868 2SA1020Y
Q869 2SA1020Y
RD31 330
RD32 330
RD33 330
RD34 330
RD35 0.2 1R
RD36 0.2 1R
RD37 0.2 1R
RD38 0.2 1R
RD39 1K 1R
RD40 1K 1R
RD41 1K 1R
RD42 1K 1R
TEM2025Y L850
TEM2011Y L851
TEM2025Y L852
TEM2011Y L853
TEM2025Y L854
TEM2011Y L855
TEM2025Y L856
TEM2011Y L857
Q870 2SK894
Q871 2SK894
Q872 2SK894
Q841 2SK894
L858 TEM2011Y
L859 TEM2011Y
L860 TEM2011Y
L861 TEM2011Y
820P2KV CD10
D803 FMG-G365
C806 820μ 450V
385
P803 385V
TO POWER
CD13 150P2KV
RD46 1.6K2R
DD09 RU1P
D808 AL01Z
D807 AL01Z
D810 AL01Z
D809 AL01Z
Q861 MCT7815BT
C803 100μ 100V
C804 C805 0.1μ 10μ 50V 35V
D805 1SS176FA
R806 12K2R
R807 12K2R
RD49 12K2R
D802 1S1887AFA
R815 15K
C813 330μ 50V
DD10 UZ24B5A
D806 UZ4.7BSC
C808 330P50V
R812 47K
C809 0.1 50V
R816 82
R810 100G
C807 0.047μ50V
IDET CT SYNC REF ON/OFF CS VCC VC
Q842 FA5331
IFB IIN- VDET OVP VFB VIN- GND OUT
D804 AK04
R808 10
C810 180P 50V
C811 1800P 50V
R811 10K
C812 0.15μ
R813 680K
R814 33K
R803 240KG
R804 240KG
R805 2.4KG
CD03 470P 50V
RD45 3R0.47
R859 3R0.47
R858 3R0.47
CD11 0.1 630V
RD44 120KG
R817 180KG
R824 180KG
R818 180KG
R819 2K
R820 1KB
385V AJT.
R821 270KF
R822 270KF
R823 2KF
RD43 120F
③
④
⑤
⑥
14.4
9.6
9.2
78.9
20.2
14.9
20.3
15.0

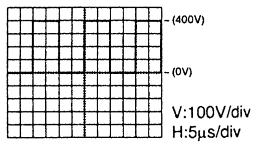
① T803 ④



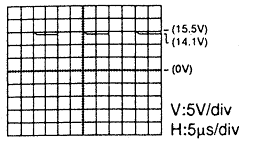
⑤ Q842 ③



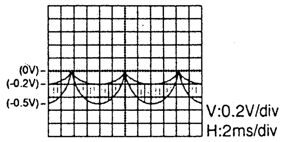
② T803 ⑥



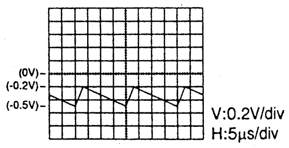
⑥ Q842 ⑧



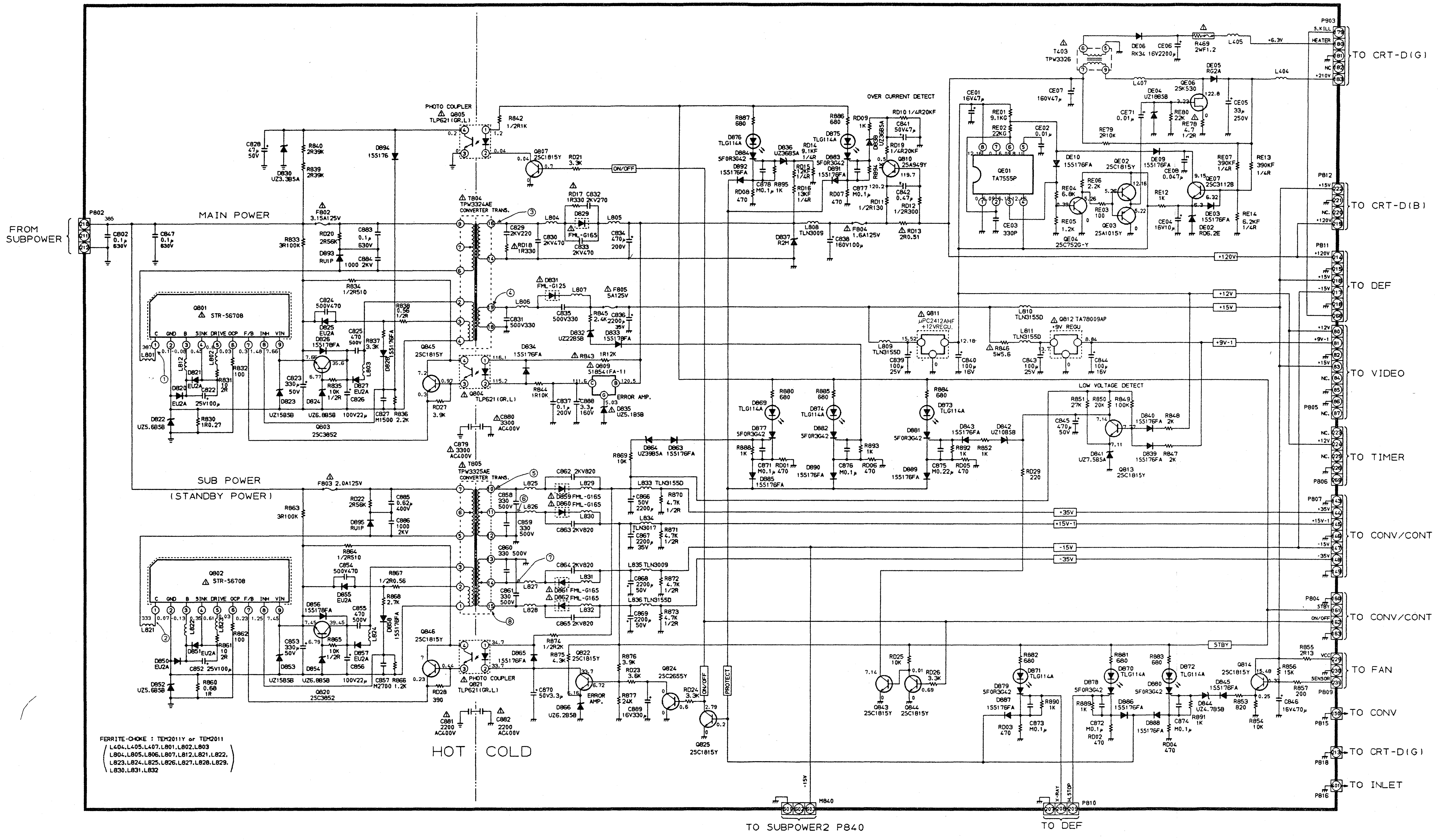
③ Q842 ⑯



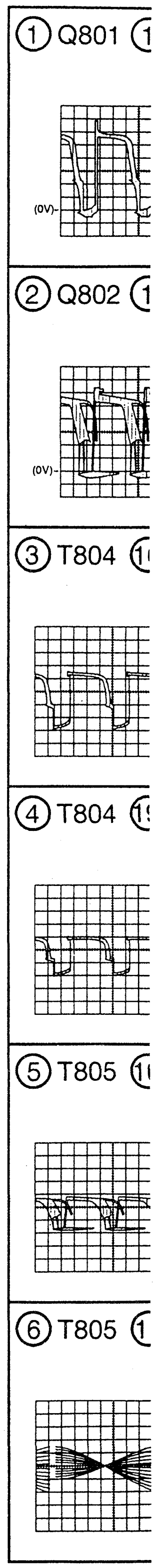
④ Q842 ⑯

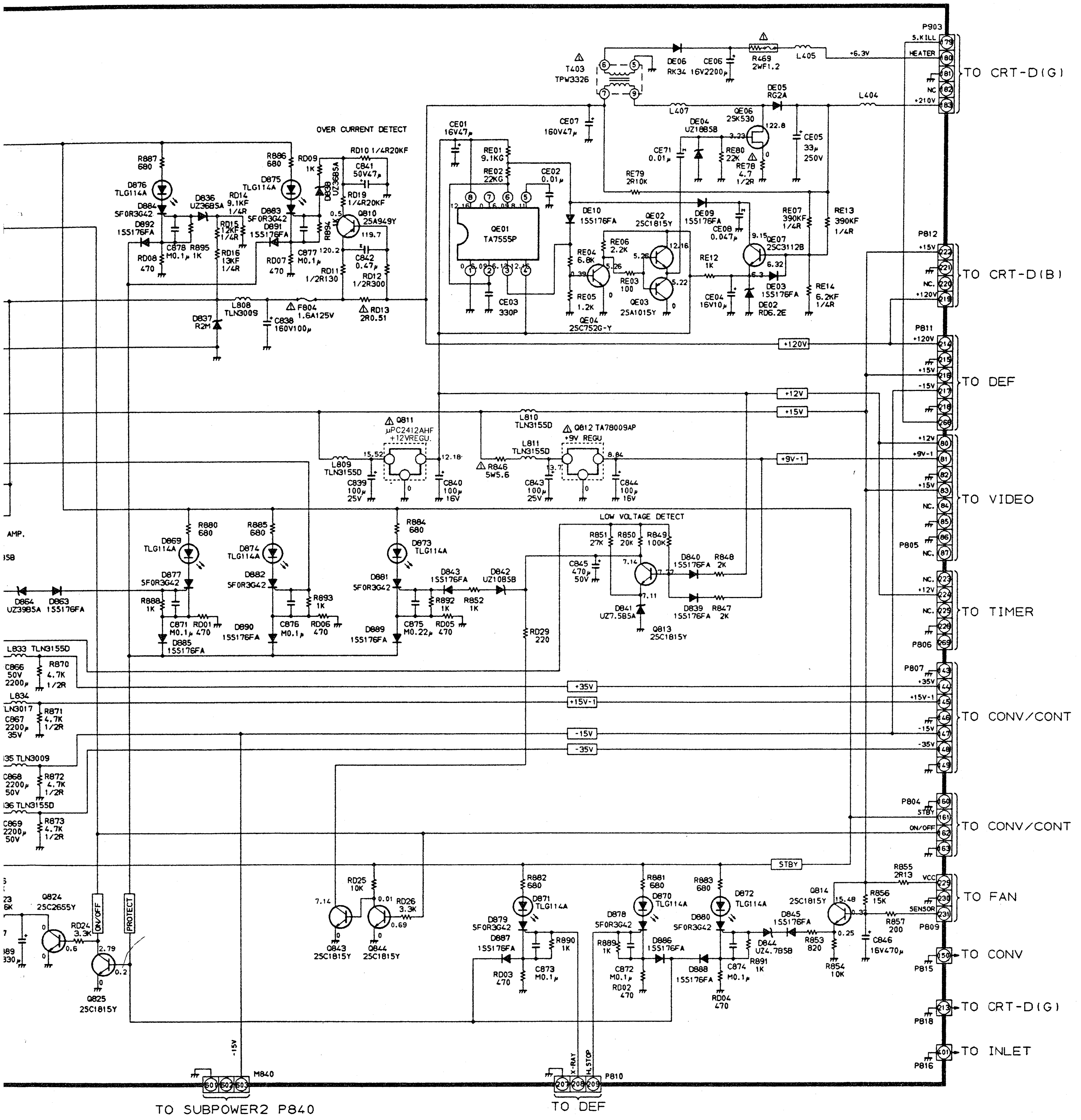


4-2. Power Ciruit

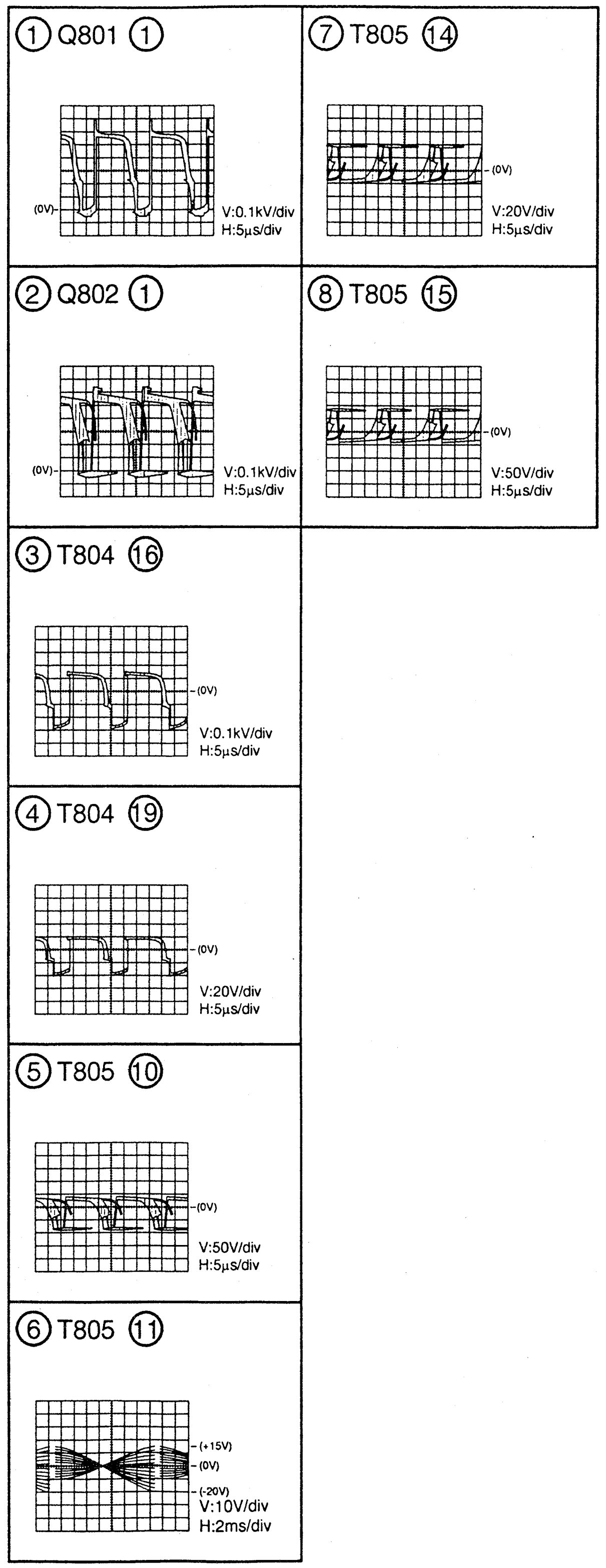

FROM SUBPOWER
P802
MAIN POWER
SUB POWER
(STANDBY POWER)
Q801 STR-S6708
Q802 STR-S6708
Q803 2SC3852
Q820 2SC3852
F802 3.15A125V
F803 2.0A125V
PHOTO COUPLER
Q805 TLP621(GR,L)
Q804 TLP621(GR,L)
Q821 TLP621(GR,L)
T804 TPW3324AE CONVERTER TRANS.
T805 TPW3325AE CONVERTER TRANS.
Q809 SI854(FA-1)
ERROR AMP.
ON/OFF
OVER CURRENT DETECT
Q810 2SA949Y
F804 1.6A125V
F805 5A125V
QE01 TA7555P
T403 TPW3326
QE06 2SK530
LOW VOLTAGE DETECT
Q811 μPC2412AHF +12VREGU.
Q812 TA78009AP +9V REGU
STBY
PROTECT
+120V
+12V
+15V
+9V-1
+35V
+15V-1
-15V
-35V
HOT
COLD
TO CRT-D(G)
TO CRT-D(B)
TO DEF
TO VIDEO
TO TIMER
TO CONV/CONT
TO CONV/CONT
TO FAN
TO CONV
TO CRT-D(G)
TO INLET
TO SUBPOWER2 P840
TO DEF
FERRITE-CHOKE : TEM2011Y or TEM2011
L404,L405,L407,L801,L802,L803
L804,L805,L806,L807,L812,L821,L822,
L823,L824,L825,L826,L827,L828,L829,
L830,L831,L832

Power ciru

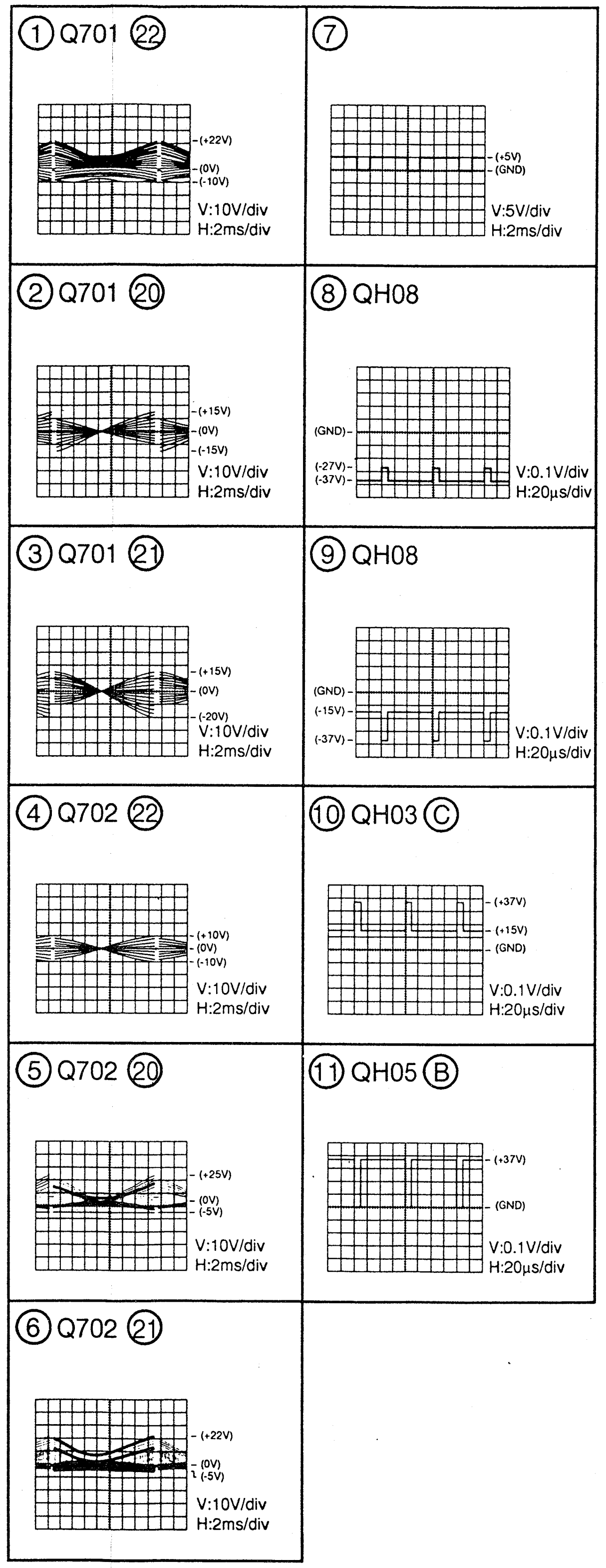



P903
S.KILL
HEATER
NC
+210V
TO CRT-D(G)
T403
TPW3326
DE06
RK34
CE06
16V2200μ
R469
2WF1.2
L405
+6.3V
DE05
RG2A
L404
L407
QE06
2SK530
DE04
UZ18BSB
CE07
160V47μ
CE05
33μ
250V
CE01
16V47μ
RE01
9.1KG
RE02
22KG
CE02
0.01μ
QE01
TA7555P
CE71
0.01μ
RE80
22K
RE78
4.7
1/2R
RE79
2R10K
DE10
1SS176FA
QE02
2SC1815Y
DE09
1SS176FA
CE08
0.047μ
RE07
390KF
1/4R
RE13
390KF
1/4R
QE07
2SC3112B
RE04
6.8K
RE06
2.2K
RE03
100
RE05
1.2K
QE03
2SA1015Y
QE04
2SC7520-Y
CE03
330P
RE12
1K
CE04
16V10μ
DE03
1SS176FA
DE02
RD6.2E
RE14
6.2KF
1/4R
P812
+15V
NC
+120V
TO CRT-D(B)
P811
+120V
+15V
-15V
TO DEF
+120V
+12V
+15V
OVER CURRENT DETECT
RD10 1/4R20KF
C841
50V47μ
RD19
1/4R20KF
Q810
2SA949Y
UZ3685A
R887
680
D876
TLG114A
D884
SF0R3G42
D892
1SS176FA
RD08
470
C878
M0.1μ
R895
1K
D836
UZ3685A
RD14
9.1KF
1/4R
RD15
12KF
1/4R
RD16
13KF
1/4R
R886
680
D875
TLG114A
D883
SF0R3G42
D891
1SS176FA
RD09
1K
RD07
470
C877
M0.1μ
RD11
1/2R130
C842
0.47μ
RD12
1/2R300
L808
TLN3009
D837
R2M
C838
160V100μ
F804
1.6A125V
RD13
2R0.51
Q811
μPC2412AHF
+12VREGU.
L809
TLN3155D
C839
100μ
25V
C840
100μ
16V
L810
TLN3155D
L811
TLN3155D
R846
5W5.6
Q812 TA78009AP
+9V REGU.
C843
100μ
25V
C844
100μ
16V
+9V-1
+12V
+9V-1
+15V
NC
TO VIDEO
P805
AMP.
R880
680
D869
TLG114A
D877
SF0R3G42
R888
1K
C871
M0.1μ
RD01
470
D885
1SS176FA
D890
1SS176FA
R885
680
D874
TLG114A
D882
SF0R3G42
C876
M0.1μ
RD06
470
R893
1K
R884
680
D873
TLG114A
D881
SF0R3G42
D889
1SS176FA
C875
M0.22μ
RD05
470
D843
1SS176FA
R892
1K
R852
1K
D842
UZ10BSB
RD29
220
LOW VOLTAGE DETECT
R851
27K
R850
20K
R849
100K
C845
470μ
50V
D840
1SS176FA
R848
2K
D841
UZ7.5BSA
D839
1SS176FA
R847
2K
Q813
2SC1815Y
NC
+12V
NC
TO TIMER
P806
D864
UZ39B5A
D863
1SS176FA
L833 TLN3155D
C866
50V
2200μ
R870
4.7K
1/2R
L834
LN3017
C867
2200μ
35V
R871
4.7K
1/2R
L835 TLN3009
C868
2200μ
50V
R872
4.7K
1/2R
L836 TLN3155D
C869
2200μ
50V
R873
4.7K
1/2R
P807
+35V
+15V-1
-15V
-35V
TO CONV/CONT
+35V
+15V-1
-15V
-35V
P804
STBY
ON/OFF
TO CONV/CONT
STBY
Q824
2SC2655Y
RD24
3.3K
ON/OFF
PROTECT
Q825
2SC1815Y
RD25
10K
RD26
3.3K
Q843
2SC1815Y
Q844
2SC1815Y
R882
680
D871
TLG114A
D879
SF0R3G42
D887
1SS176FA
RD03
470
C873
M0.1μ
R890
1K
R881
680
D870
TLG114A
D878
SF0R3G42
R889
1K
C872
M0.1μ
RD02
470
D886
1SS176FA
R883
680
D872
TLG114A
D880
SF0R3G42
D888
1SS176FA
C874
M0.1μ
R891
1K
RD04
470
D845
1SS176FA
D844
UZ4.7BSB
R853
820
R854
10K
Q814
2SC1815Y
R856
15K
R857
200
C846
16V470μ
R855
2R13
VCC
SENSOR
P809
TO FAN
TO CONV
P815
TO CRT-D(G)
P818
TO INLET
P816
M840
-15V
TO SUBPOWER2 P840
X-RAY
H.STOP
P810
TO DEF

Power ciruit wave forms.



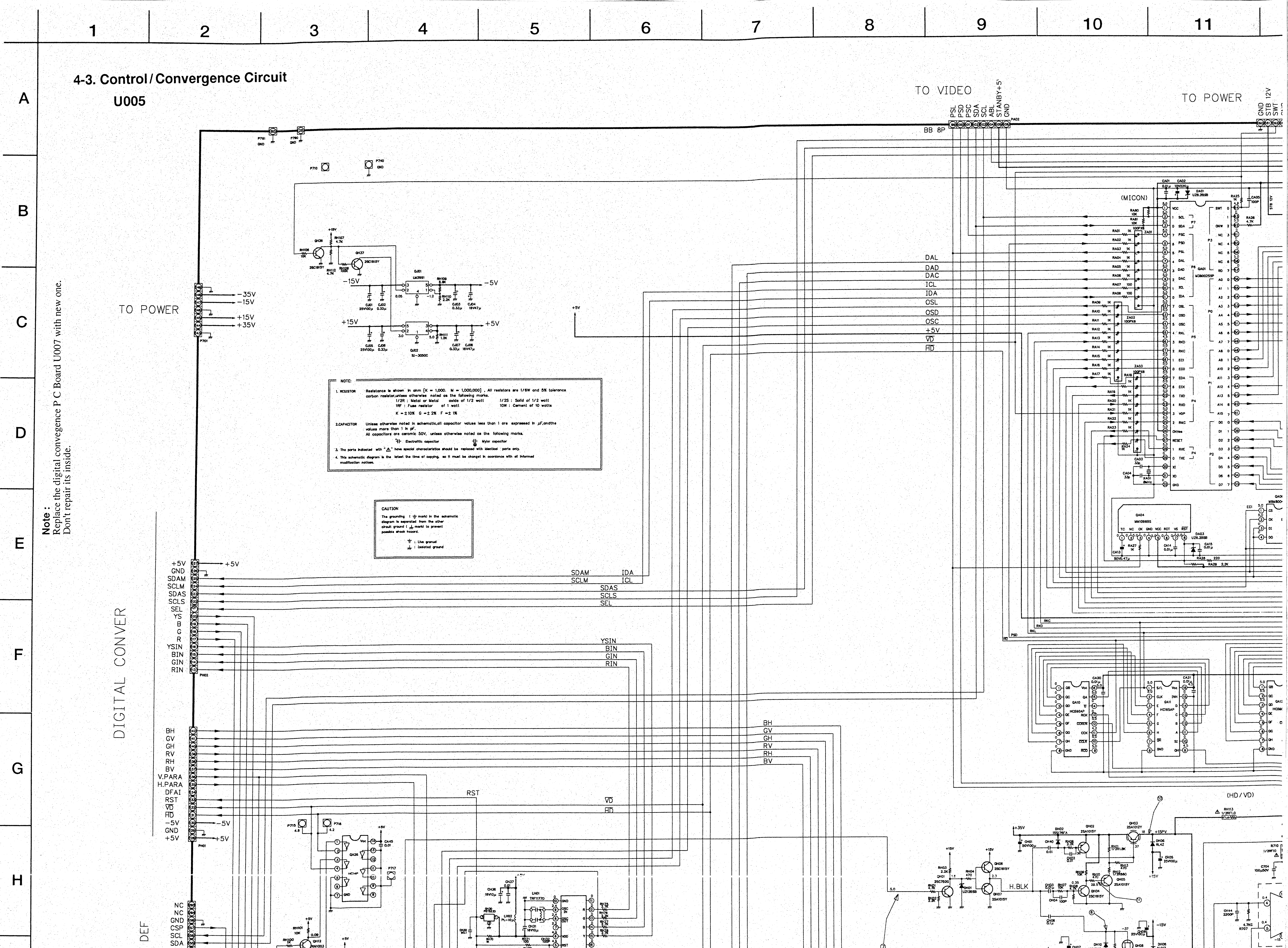
Control / Convergense ciruit wave forms



4-3. Control / Convergence Circuit

U005

Note :
Replace the digital convegence P C Board U007 with new one.
Don't repair its inside.


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
TO VIDEO
PSL
PSD
PSC
SDA
SCL
ABL
STANBY+5V
GND
BB 8P
TO POWER
GND
STB 12V
SWT
P791
P790
P710
P740
TO POWER
-35V
-15V
+15V
+35V
P701
QH36
QH37
2SC1815Y
QJ01
LM2991
QJ02
SI-3050C
-15V
-5V
+15V
+5V
(MICON)
QA01
M38002SP
DAL
DAD
DAC
ICL
IDA
OSL
OSD
OSC
+5V
VD
HD
QA04
MM1096BS
DIGITAL CONVER
+5V
GND
SDAM
SCLM
SDAS
SCLS
SEL
YS
B
G
R
YSIN
BIN
GIN
RIN
PH02
SDAM
SCLM
IDA
ICL
SDAS
SCLS
SEL
YSIN
BIN
GIN
RIN
BH
GV
GH
RV
RH
BV
V.PARA
H.PARA
DFAI
RST
VD
HD
-5V
GND
+5V
PH01
RST
VD
HD
BH
GV
GH
RV
RH
BV
QA10
HC590AP
QA11
HC165AP
QA26
HC14P
P715
P716
P717
LH01
TRF1177D
DEF
NC
NC
GND
CSP
SCL
SDA
QH01
2SC752G
QH02
2SA1015Y
QH03
2SA1012Y
QH04
2SC1815Y
QH05
2SA1015Y
QH06
2SC1815Y
QH07
2SA1015Y
H.BLK
(HD / VD)
RH113
1/2RF1.0
R707
R710
C704

NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1,000. M = 1,000,000] , All resistors are 1/6W and 5% tolerance carbon resistor,unless otherwise noted as the following marks.

1/2R : Metal or Metal oxide of 1/2 watt
1/2S : Solid of 1/2 watt
1RF : Fuse resistor of 1 watt
10W : Cement of 10 watts

K = ± 10% G = ± 2% F = ± 1%

2.CAPACITOR Unless otherwise noted in schematic,all capacitor values less than 1 are expressed in μF,andthe values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.

Electrolitic capacitor
Mylar capacitor

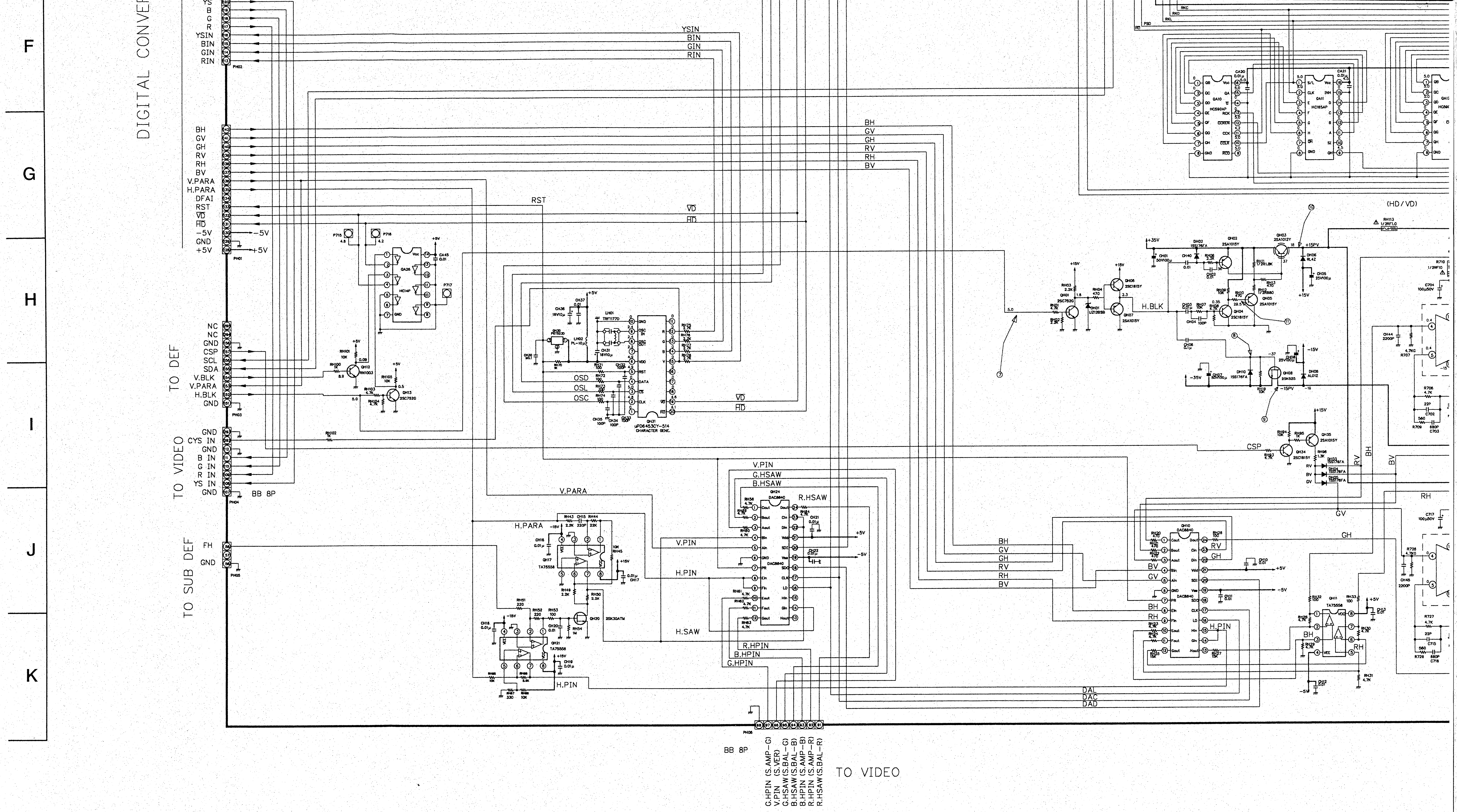
3. The parts indicated with "⚠" have special characteristics should be replaced with identical parts only.

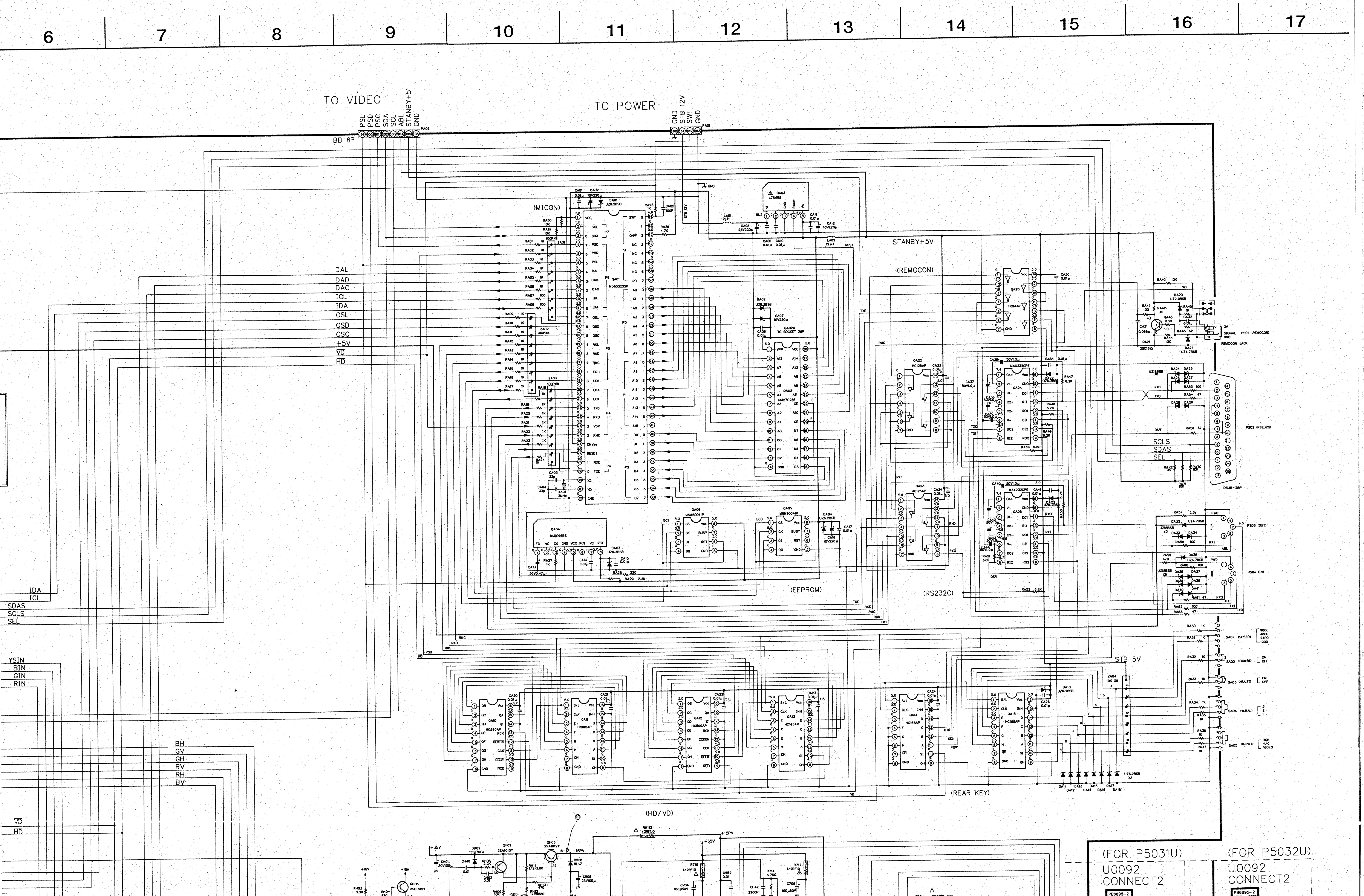
4. This schematic diagram is the latest the time of copying, so it must be changet in acordance with all informed modification notices.

CAUTION

The grounding (⏚ mark) in the schematic diagram is separated from the other circuit ground (⏚ mark) to prevent possible shock hazard.

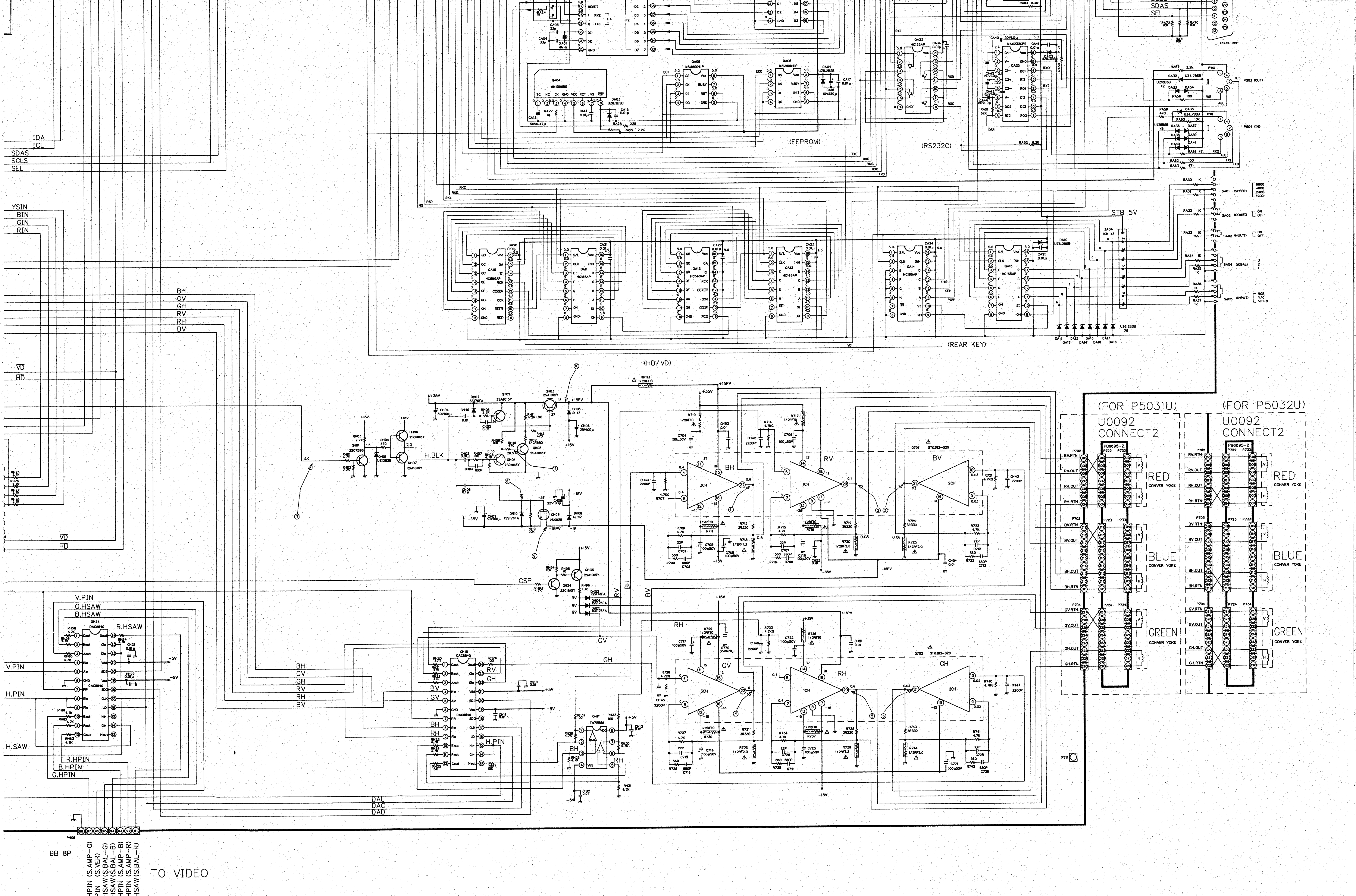
⏚ : Live gronud
⏚ : Isolated ground


F
G
H
I
J
K
DIGITAL CONVE
YS
B
G
R
YSIN
BIN
GIN
RIN
PH02
BH
GV
GH
RV
RH
BV
V.PARA
H.PARA
DFAI
RST
VD
HD
-5V
GND
+5V
PH01
TO DEF
NC
NC
GND
CSP
SCL
SDA
V.BLK
V.PARA
H.BLK
GND
PH03
TO VIDEO
GND
CYS IN
GND
B IN
G IN
R IN
YS IN
GND
PH04
BB 8P
TO SUB DEF
FH
GND
PH05
RST
QA26
HC14P
P715
P716
P717
CA45
QH12
RN1003
QH13
2SC752G
OSD
OSL
OSC
QH31
uPD6453CY-514
CHARACTER GENE.
LH01
LH02
V.PARA
H.PARA
QH17
TA75558
QH20
2SK30ATM
QH21
TA75558
H.PIN
V.PIN
H.SAW
V.PIN
G.HSAW
B.HSAW
R.HSAW
QH24
DAC8840
R.HPIN
B.HPIN
G.HPIN
+5V
-5V
PH06
BB 8P
G.HPIN (S.AMP-G)
V.PIN (S.VER)
G.HSAW (S.BAL-G)
B.HSAW (S.BAL-B)
B.HPIN (S.AMP-B)
R.HPIN (S.AMP-R)
R.HSAW (S.BAL-R)
TO VIDEO
QA20
HC590AP
QA11
HC165AP
RKC
RKD
RKL
RD
PSD
(HD/VD)
RH113
+35V
DH02
1SS176FA
QH02
2SA1015Y
QH03
2SA1012Y
+15PV
QH01
2SC752G
QH06
2SC1815Y
QH07
2SA1015Y
DH01
UZ12BSB
H.BLK
QH04
2SC1815Y
QH05
2SA1015Y
QH08
2SK525
-15V
-35V
-15PV
CSP
QH34
2SC1815Y
QH35
2SA1015Y
RV
BH
BV
GV
RH
GH
QH10
DAC8840
BH
GV
GH
RV
RH
BV
H.PIN
QH11
TA75558
DAL
DAC
DAD
C704
C702
C703
C717
C715
C716

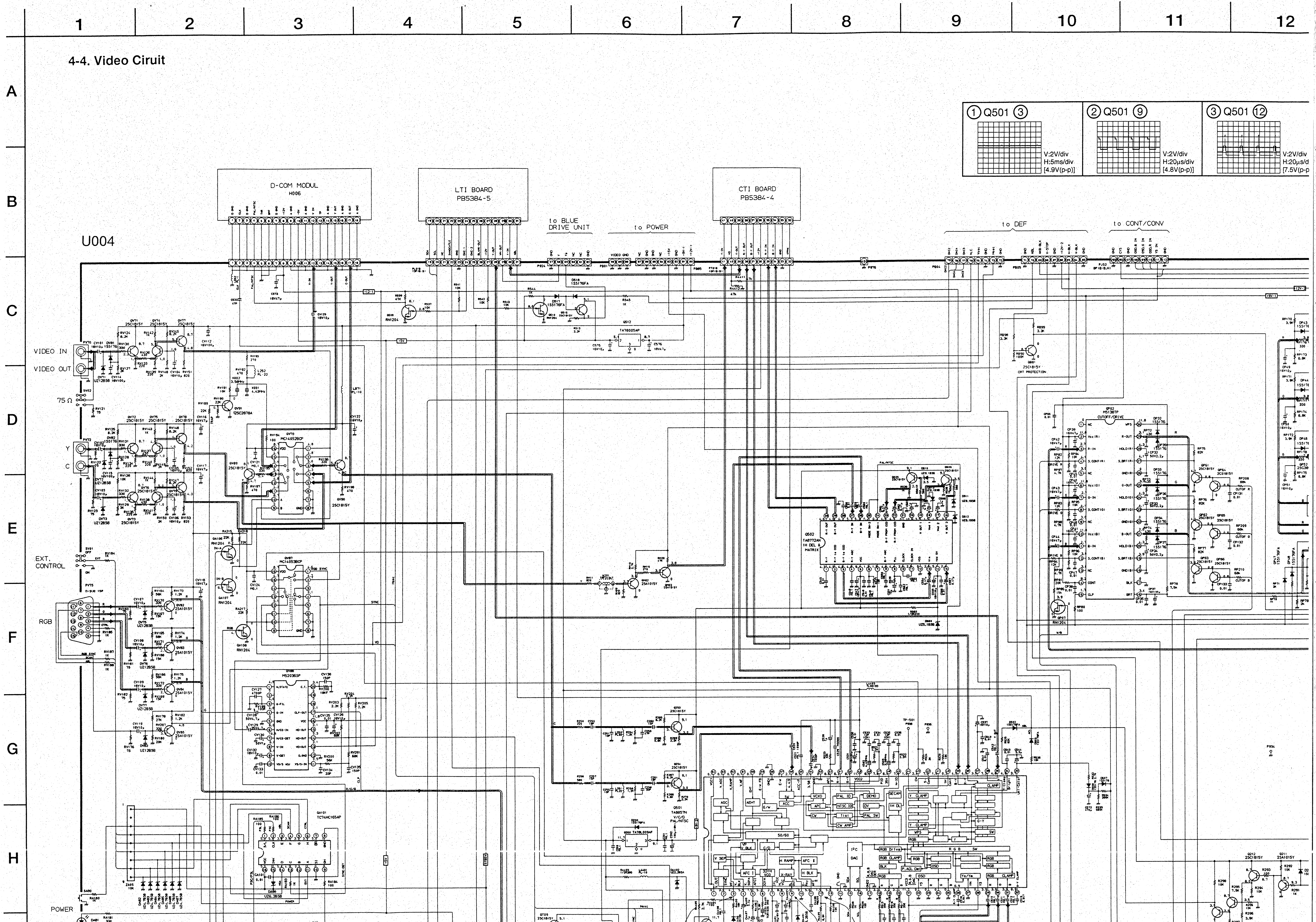

6
7
8
9
10
11
12
13
14
15
16
17
TO VIDEO
PSL
PSD
PSC
SDA
SCL
ABL
STANBY+5V
GND
PA02
BB 8P
TO POWER
GND
STB
12V
SWT
GND
PA01
(MICON)
QA01
M38002SP
QA03
L78MR5
STANBY+5V
(REMOCON)
QA20
HC14AP
QA21
2SC1815
REMOCON JACK
PS01 (REMOCON)
QA02
NM27C256
IC SOCKET 28P
QA22
HC125AP
QA24
MAX232CPE
PS02 (RS232C)
DSUB-25P
SCLS
SDAS
SEL
QA23
HC125AP
QA25
MAX232CPE
PS03 (OUT)
PS04 (IN)
QA04
MM1096BS
QA06
M5M80041P
QA05
M5M80041P
(EEPROM)
(RS232C)
DAL
DAD
DAC
ICL
IDA
OSL
OSD
OSC
+5V
VD
HD
IDA
ICL
SDAS
SCLS
SEL
YSIN
BIN
GIN
RIN
BH
GV
GH
RV
RH
BV
VD
HD
STB 5V
SA01 (SPEED)
9600
4800
2400
1200
SA02 (COMBI)
ON
OFF
SA03 (MULTI)
ON
OFF
SA04 (M.BAL)
3
2
1
SA05 (INPUT)
RGB
Y/C
VIDEO
QA10
HC590AP
QA11
HC165AP
QA12
HC590AP
QA13
HC165AP
QA14
HC165AP
QA15
HC165AP
ZA04
10K X8
UZ6.2BSB X8
(REAR KEY)
(HD/VD)
QH02
2SA1015Y
QH03
2SA1012Y
QH08
2SC1815Y
+35V
+15PV
+15V

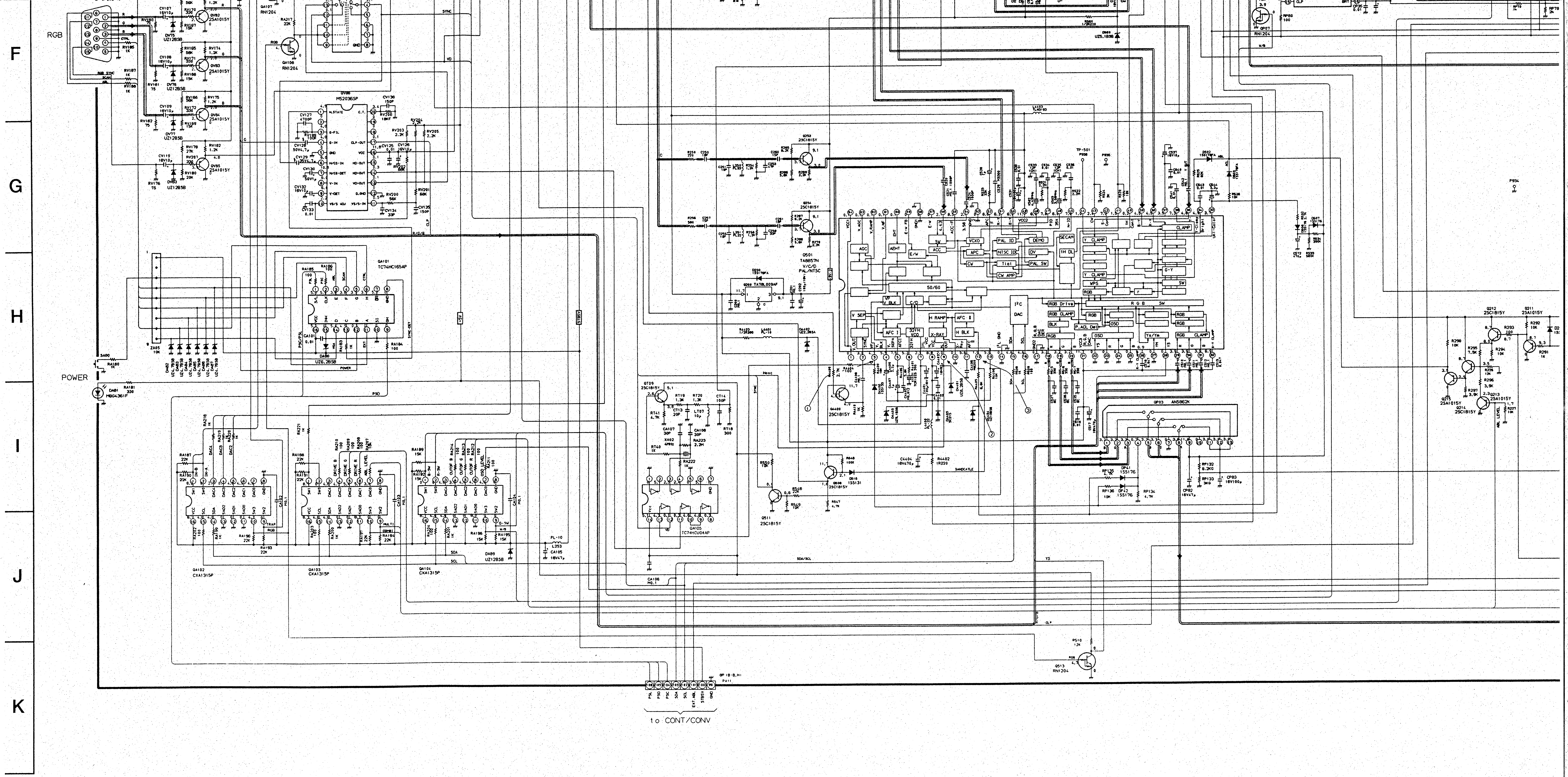
(FOR P5031U)
U0092
CONNECT2
P8695-2

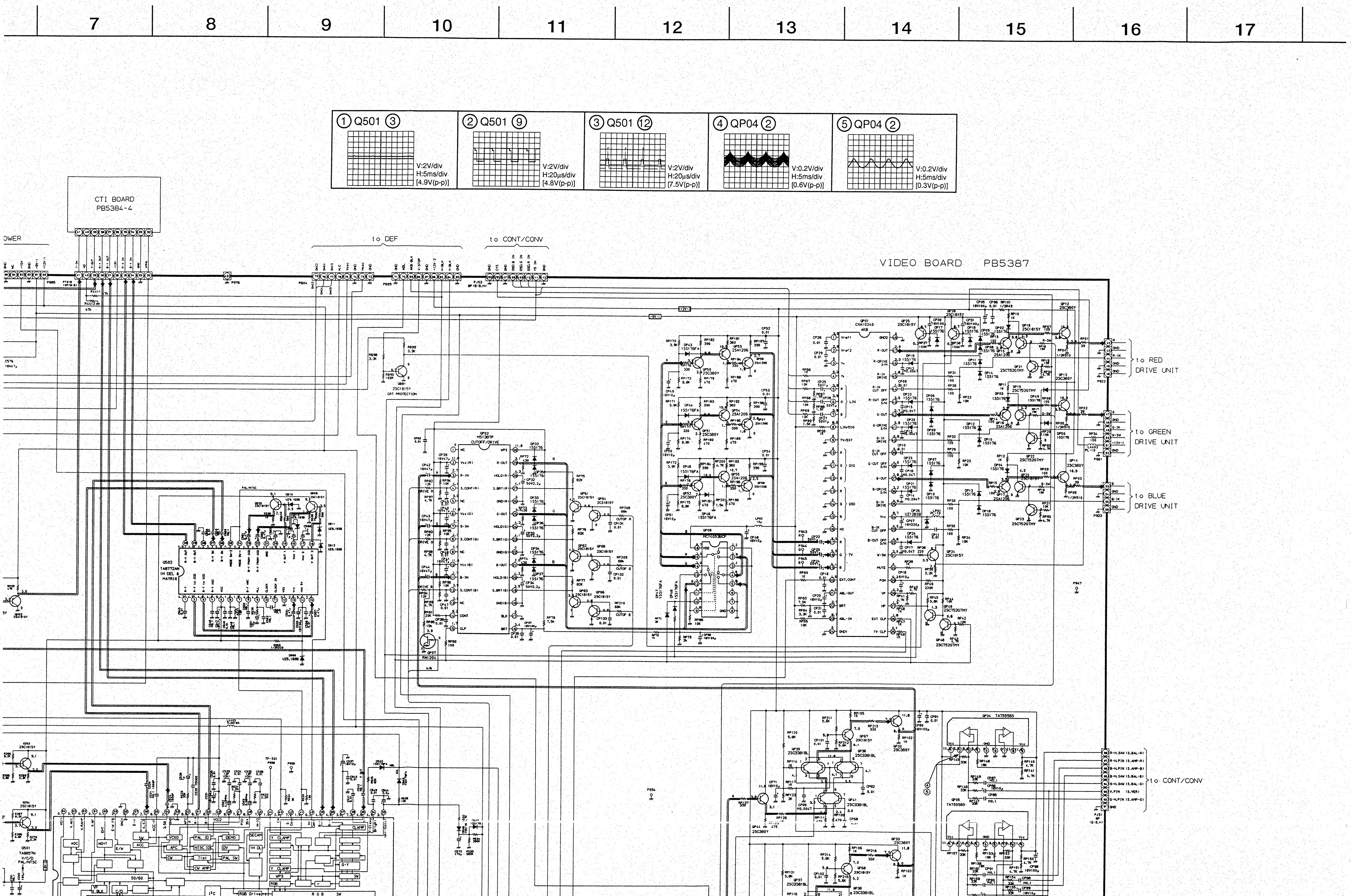
(FOR P5032U)
U0092
CONNECT2
P8695-2

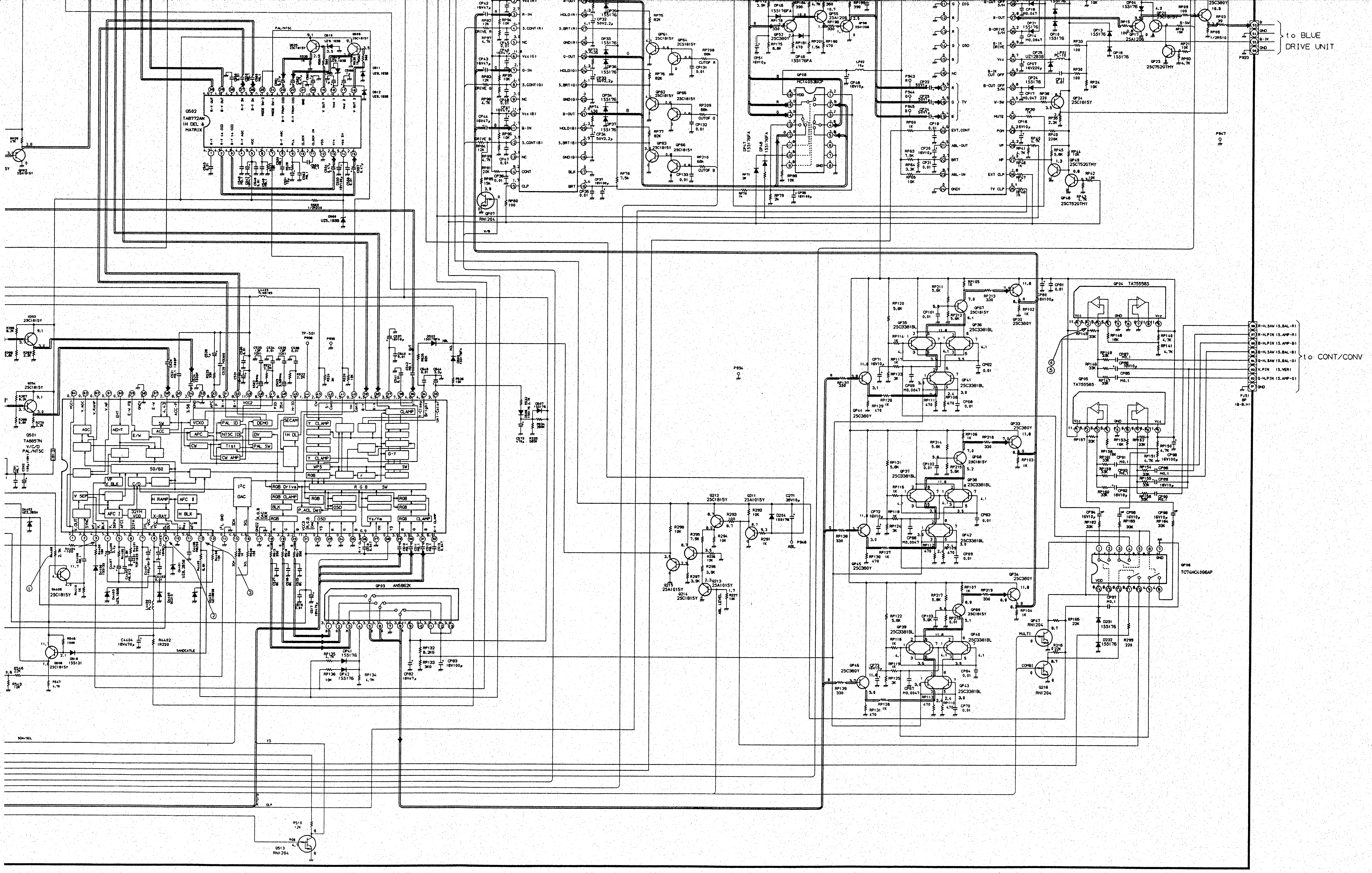

IDA
ICL
SDAS
SCLS
SEL
YSIN
BIN
GIN
RIN
(EEPROM)
(RS232C)
(REAR KEY)
STB 5V
DSUB-25P
PS03 (OUT)
PS04 (IN)
SA01 (SPEED)
SA02 (COMSI)
SA03 (MULTI)
SA04 (W.BAL)
SA05 (INPUT)
BH
GV
GH
RV
RH
BV
VD
HD
(HD/VD)
H.BLK
CSP
V.PIN
G.HSAW
B.HSAW
R.HSAW
H.PIN
H.SAW
R.HPIN
B.HPIN
G.HPIN
DAL
DAC
DAD
BB 8P
G.HPIN (S.AMP-G)
V.PIN (S.VER)
G.HSAW(S.BAL-G)
B.HSAW(S.BAL-B)
B.HPIN (S.AMP-B)
R.HPIN (S.AMP-R)
R.HSAW(S.BAL-R)
TO VIDEO
STK392-020
(FOR P5031U)
U0092
CONNECT2
(FOR P5032U)
U0092
CONNECT2
RED
CONVER YOKE
BLUE
CONVER YOKE
GREEN
CONVER YOKE
RV.RTN
RV.OUT
RH.OUT
RH.RTN
BV.RTN
BV.OUT
BH.OUT
BH.RTN
GV.RTN
GV.OUT
GH.OUT
GH.RTN

4-4. Video Ciruit


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
① Q501 ③
V:2V/div
H:5ms/div
[4.9V(p-p)]
② Q501 ⑨
V:2V/div
H:20µs/div
[4.8V(p-p)]
③ Q501 ⑫
V:2V/div
H:20µs/d
[7.5V(p-p
U004
D-COM MODUL
H006
LTI BOARD
PB5384-5
CTI BOARD
PB5384-4
to BLUE
DRIVE UNIT
to POWER
to DEF
to CONT/CONV
VIDEO IN
VIDEO OUT
75 Ω
Y
C
EXT.
CONTROL
RGB
POWER
QV70
MC14052BCP
QV87
MC14053BCP
QV86
M52036SP
QA101
TC74HC165AP
Q502
TA8772AN
1H DEL &
MATRIX
Q501
TA8857N
V/C/D
PAL/NTSC
QP02
M51387P
CUTOFF/DRIVE
Q512
TA78005AP
Q601
2SC1815Y
CRT PROTECTION
Q212
2SC1815Y
Q211
2SA1015Y

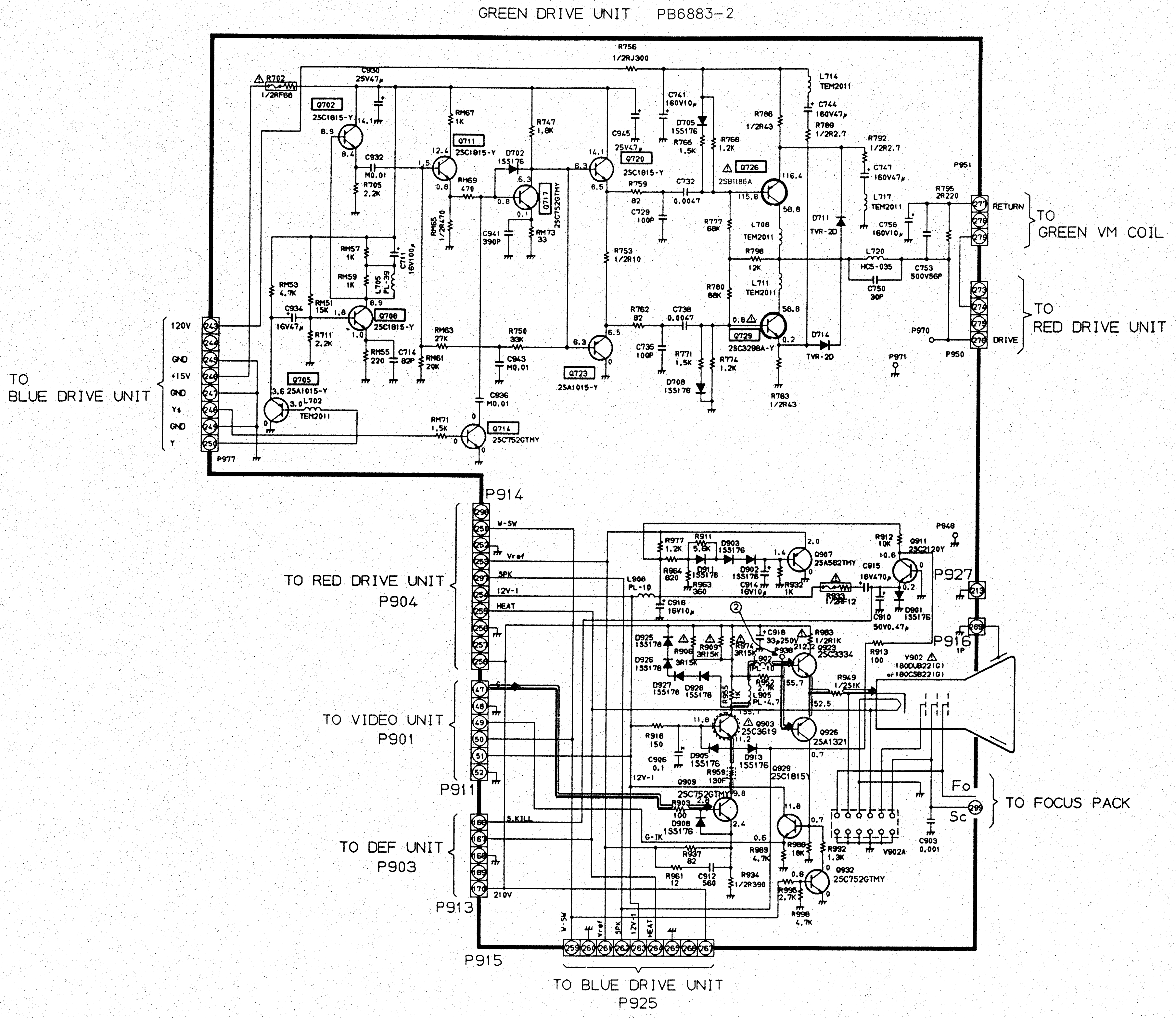

F
G
H
I
J
K
RGB
POWER
DA81
MBG4361F
QV86
M52036SP
QA101
TC74HC165AP
QA107
RN1204
QA106
RN1204
QV82
2SA1015Y
QV83
2SA1015Y
QV84
2SA1015Y
QV85
2SA1015Y
QA102
CXA1315P
QA103
CXA1315P
QA104
CXA1315P
QA105
TC74HCU04AP
QT09
2SC1815Y
Q253
2SC1815Y
Q254
2SC1815Y
Q501
TA8857N
Y/C/D
PAL/NTSC
Q260
TA78L009AF
Q511
2SC1815Y
QP03
AN5862K
QP07
RN1204
Q212
2SC1815Y
Q211
2SA1015Y
Q213
2SA1015Y
Q214
2SC1815Y
Q215
2SA1015Y
Q513
RN1204
Q4400
2SC1815Y
Q500
2SC1815Y
TP-501
SDA/SCL
STBY5V
+5V
SYNC
VD
CLP
R/G/B
P30
POWER
to CONT/CONV


7
8
9
10
11
12
13
14
15
16
17
① Q501 ③
V:2V/div
H:5ms/div
[4.9V(p-p)]
② Q501 ⑨
V:2V/div
H:20µs/div
[4.8V(p-p)]
③ Q501 ⑫
V:2V/div
H:20µs/div
[7.5V(p-p)]
④ QP04 ②
V:0.2V/div
H:5ms/div
[0.6V(p-p)]
⑤ QP04 ②
V:0.2V/div
H:5ms/div
[0.3V(p-p)]
CTI BOARD
PB5384-4
OWER
to DEF
to CONT/CONV
VIDEO BOARD PB5387
QP01
CXA1024S
AKB
QP02
M51387P
CUTOFF/DRIVE
Q502
TA8772AN
1H DEL &
MATRIX
Q501
TA8857N
V/C/D
PAL/NTSC
QP08
MC14053BCP
QP04 TA75558S
Q801
2SC1815Y
CRT PROTECTION
QP12
2SC380Y
QP13
2SC380Y
QP14
2SC380Y
RP01
39
RP02
39
RP03
39
RP34
100
L4402
PL-10
R
GND
R-1K
GND
GND
P922
to RED
DRIVE UNIT
G
GND
G-1K
V-SW
+12V-1
GND
P901
to GREEN
DRIVE UNIT
B
GND
B-1K
GND
P923
to BLUE
DRIVE UNIT
R-H.SAW (S.BAL-R)
R-H.PIN (S.AMP-R)
B-H.PIN (S.AMP-B)
B-H.SAW (S.BAL-B)
G-H.SAW (S.BAL-G)
V.PIN (S.VER)
G-H.PIN (S.AMP-G)
GND
PJ51
8P
(B-B.H)
to CONT/CONV
+12V-2
+9V-1
TP-501
P934
P947

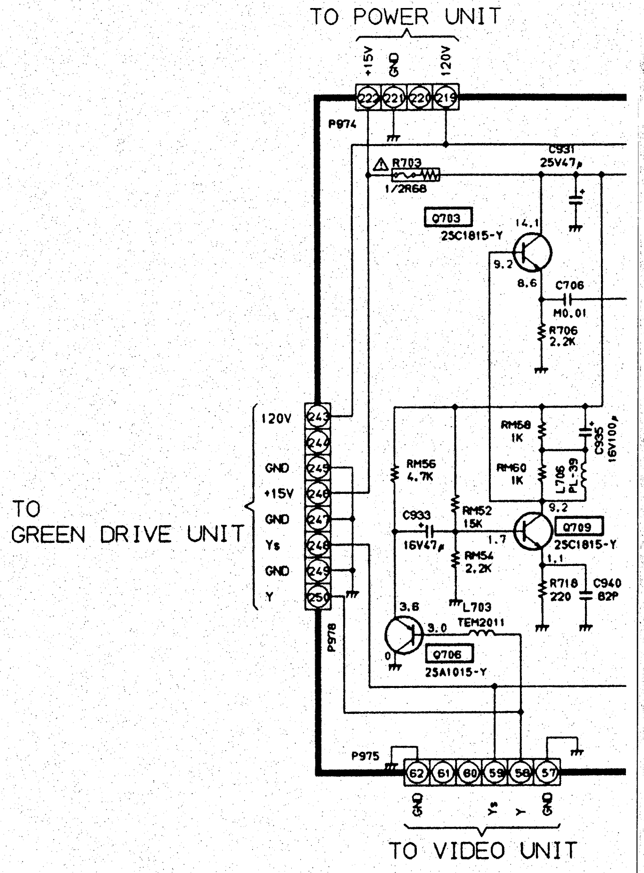

to BLUE DRIVE UNIT
to CONT/CONV
Q502
TA8772AN
1H DEL &
MATRIX
Q501
TA8857N
V/C/D
PAL/NTSC
QP03 AN5862K
QP08
HC14053BCP
QP04 TA75558S
QP05
TA75558S
QP06
TC74HC4066AP
Q211
2SA1015Y
Q212
2SC1815Y
Q213
2SA1015Y
Q214
2SC1815Y
Q215
2SA1015Y
Q513
RN1204
Q218
RN1204
QP47
RN1204
QP07
RN1204
ABL LEVEL
P948
ABL
TP-501
P958
P934
P947
PJ51
P923
MULTI
COMBI
SANDCASTLE
SDA/SCL
Y3
CLP
①
②
③
④
⑤

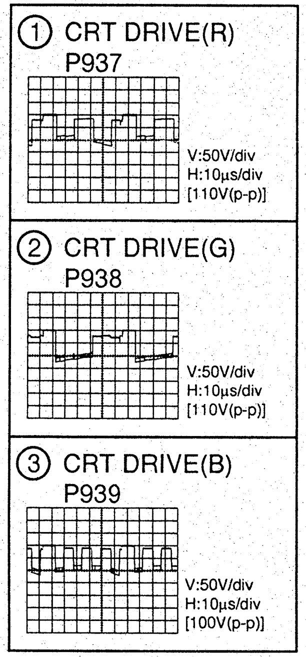
4-5. CRT (R, G, B) / LTI / CTICiruit

CRT Drive (G) Circuit
U0062


GREEN DRIVE UNIT PB6883-2
TO BLUE DRIVE UNIT
120V
GND
+15V
GND
Ys
GND
Y
P977
Q702 2SC1815-Y
Q711 2SC1815-Y
Q717 2SC752GTMY
Q720 2SC1815-Y
Q726 2SB1186A
Q708 2SC1815-Y
Q705 2SA1015-Y
Q723 2SA1015-Y
Q729 2SC3298A-Y
Q714 2SC752GTMY
L714 TEM2011
L717 TEM2011
L708 TEM2011
L711 TEM2011
L702 TEM2011
L720 HCS-035
D711 TVR-2D
D714 TVR-2D
P951
RETURN
DRIVE
TO GREEN VM COIL
TO RED DRIVE UNIT
P970
P971
P950
P914
W-SW
Vref
SPK
12V-1
HEAT
TO RED DRIVE UNIT
P904
TO VIDEO UNIT
P901
P911
TO DEF UNIT
P903
P913
S.KILL
210V
P915
W-SW
Vref
SPK
12V-1
HEAT
TO BLUE DRIVE UNIT
P925
P948
Q911 2SC2120Y
Q907 2SA562TMY
Q923 2SC3334
Q903 2SC3619
Q926 2SA1321
Q929 2SC1815Y
Q909 2SC752GTMY
Q932 2SC752GTMY
L908 PL-10
L905 PL-4.7
V902 180DUB22(G) or 180CSB22(G)
V902A
P927
P916
1P
Fo
Sc
TO FOCUS PACK
②

CRT Drive (B) Circuit
U0063

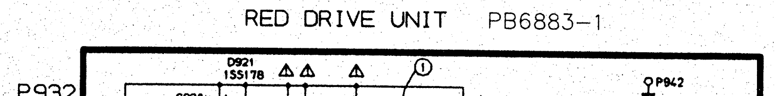

TO POWER UNIT
+15V
GND
120V
P974
P978
Q703 2SC1815-Y
Q709 2SC1815-Y
Q706 2SA1015-Y
L703 TEM2011
120V
GND
+15V
GND
Ys
GND
Y
TO GREEN DRIVE UNIT
P975
GND
Ys
Y
GND
TO VIDEO UNIT



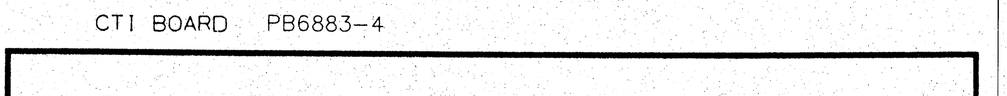
FR
DR

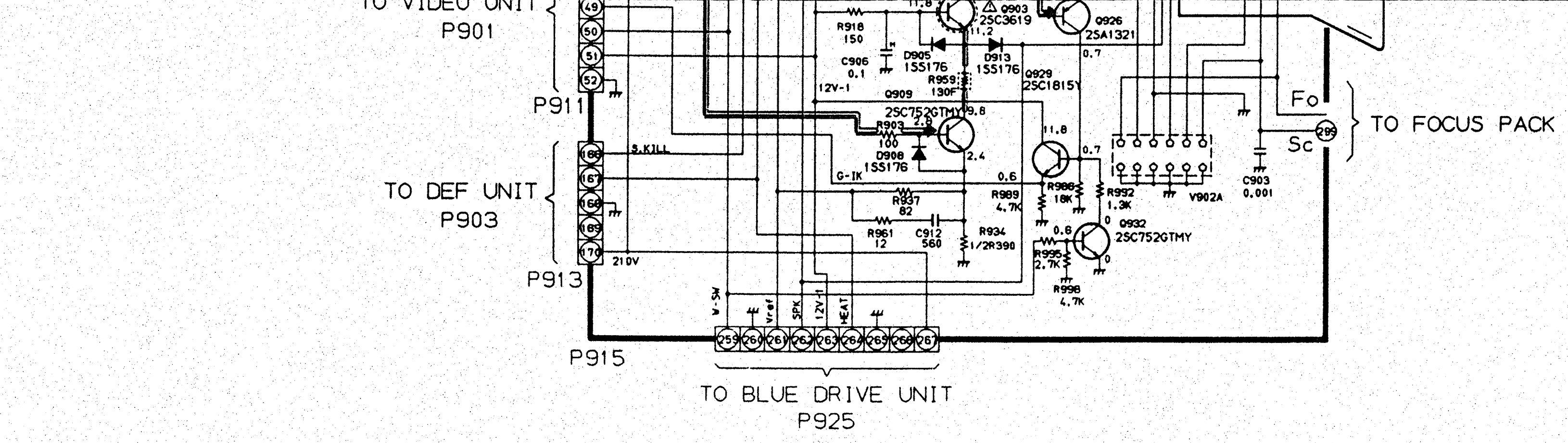
TO

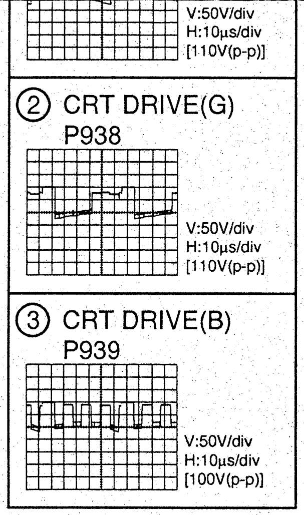
CRT Drive (R) Circuit
U0061


RED DRIVE UNIT PB6883-1
P932
D921 1SS176
①
P942

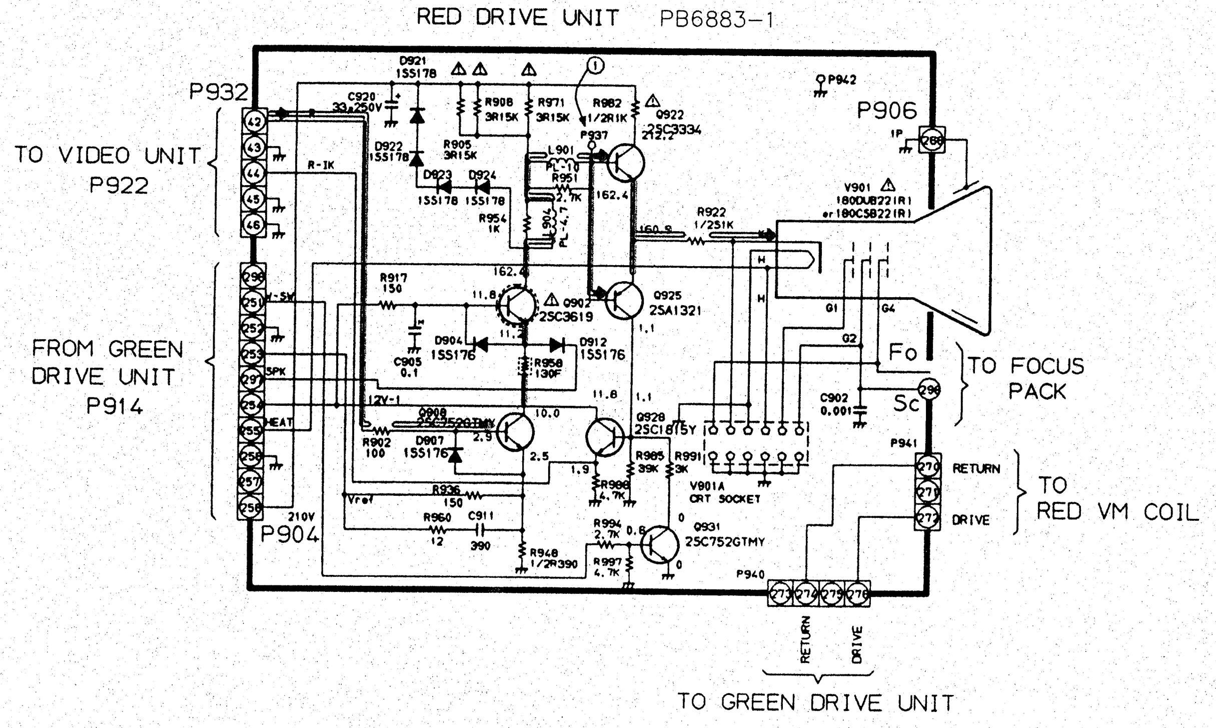
CTI Circuit
U0064


CTI BOARD PB6883-4

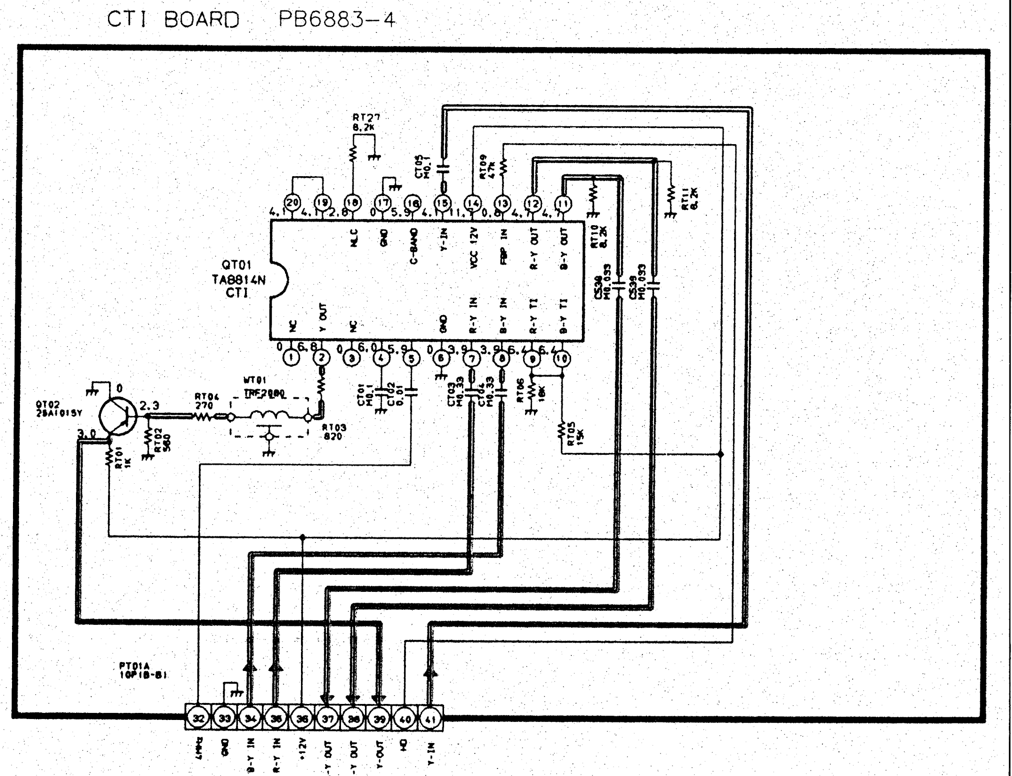

TO VIDEO UNIT
P901
P911
TO DEF UNIT
P903
P913
P915
TO BLUE DRIVE UNIT
P925
TO FOCUS PACK
Fo
Sc
2SC3619
2SA1321
2SC1815Y
2SC752GTMY
1SS176
V902A
210V
12V-1
G-IK
3.KILL



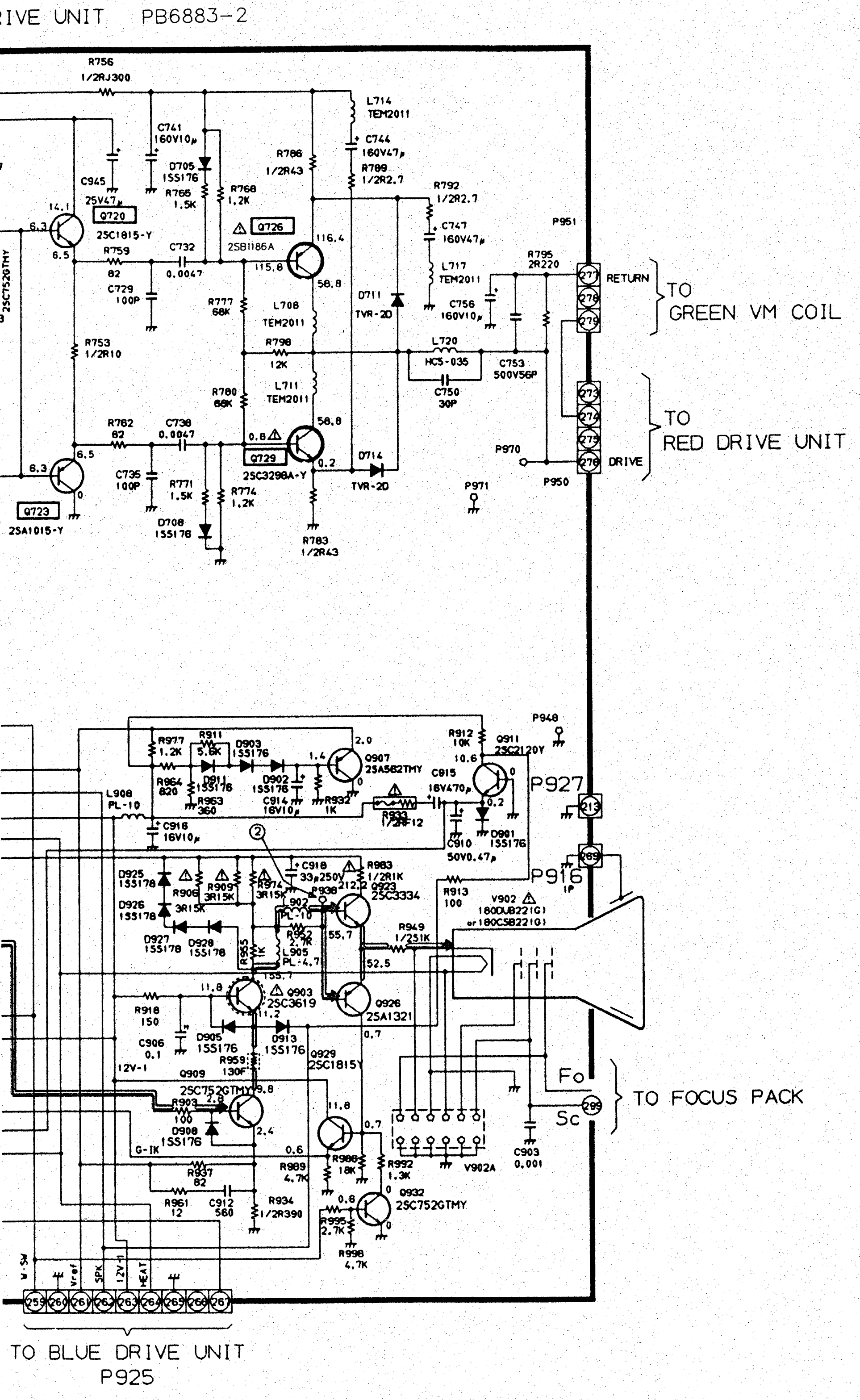
CRT Drive (R) Circuit
U0061


RED DRIVE UNIT PB6883-1
P932
TO VIDEO UNIT
P922
FROM GREEN
DRIVE UNIT
P914
P904
P906
P942
P941
P940
TO FOCUS
PACK
Fo
Sc
RETURN
DRIVE
TO
RED VM COIL
RETURN
DRIVE
TO GREEN DRIVE UNIT
Q922
2SC3334
Q902
2SC3619
Q925
2SA1321
Q928
2SC1815Y
Q908
2SC752GTMY
Q931
2SC752GTMY
V901
V901A
CRT SOCKET
L901
D921
1SS178
D922
1SS178
D923
1SS178
D924
1SS178
D904
1SS176
D907
1SS176
D912
1SS176
R-IK
V-SW
SPK
HEAT
12V-1
Vref
210V

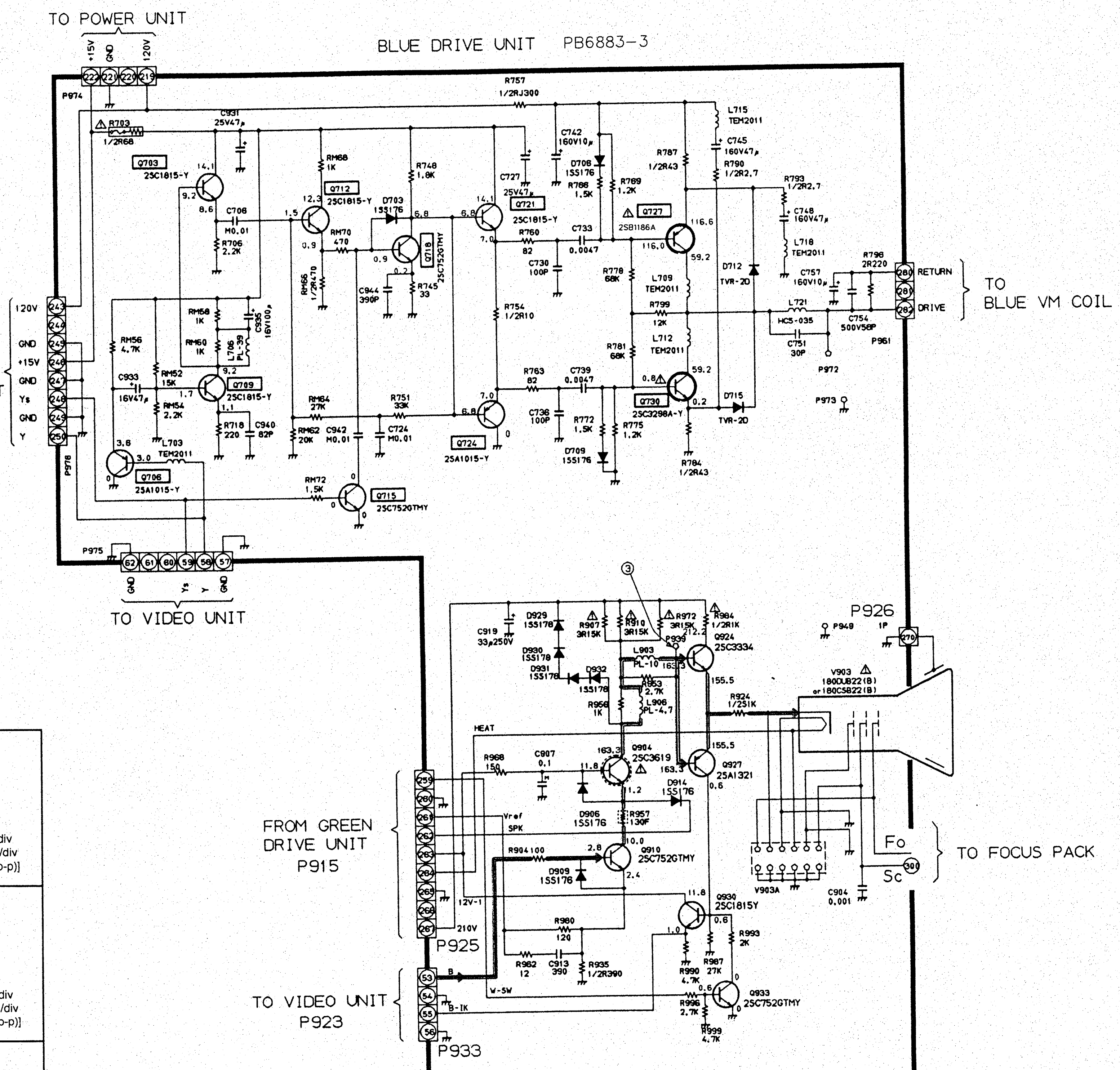
CTI Circuit
U0064

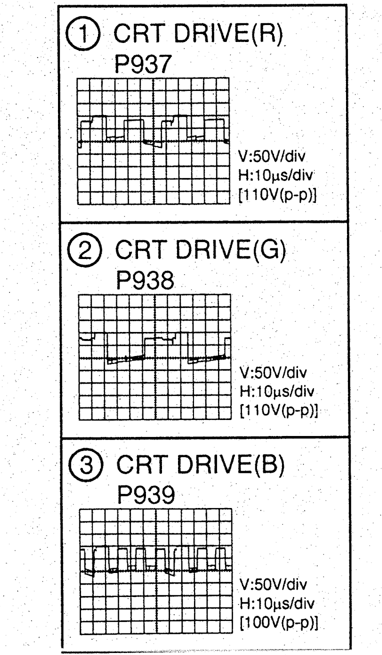

CTI BOARD PB6883-4
QT01
TA8814N
CTI
QT02
2SA1015Y
PT01A
10P18-B1
Y OUT
R-Y OUT
B-Y OUT
Y-IN
VCC 12V
R-Y IN
B-Y IN
R-Y TI
B-Y TI
C-BAND
NC
GND
B-Y IN
R-Y IN
+12V
B-Y OUT
R-Y OUT
Y-OUT
NC
Y-IN

6 7 8 9 10 11 12 13 14 15 16 17


IVE UNIT PB6883-2
Q720 2SC1815-Y
Q726 2SB1186A
Q729 2SC3298A-Y
Q723 2SA1015-Y
P951
RETURN
TO GREEN VM COIL
TO RED DRIVE UNIT
DRIVE
P970
P950
P971
P948
P927
P916
Q911 2SC2120Y
Q907 2SA562TMY
Q923 2SC3334
Q903 2SC3619
Q926 2SA1321
Q929 2SC1815Y
Q932 2SC752GTMY
V902 1800UB22(G) or 1800SB22(G)
V902A
Fo
Sc
TO FOCUS PACK
W-SW
Vref
SPK
12V-1
HEAT
TO BLUE DRIVE UNIT
P925

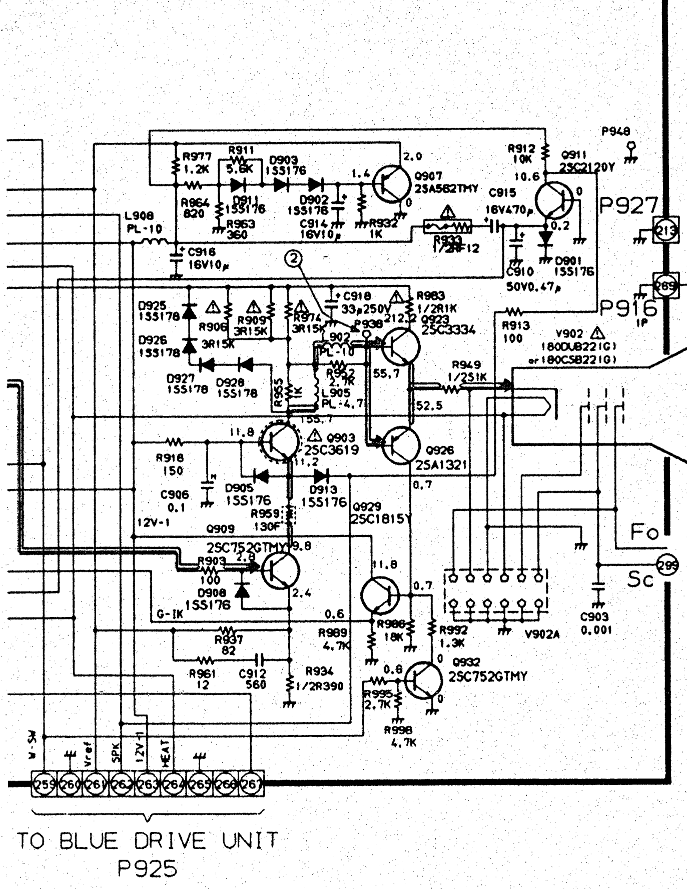
CRT Drive (B) Circuit
U0063

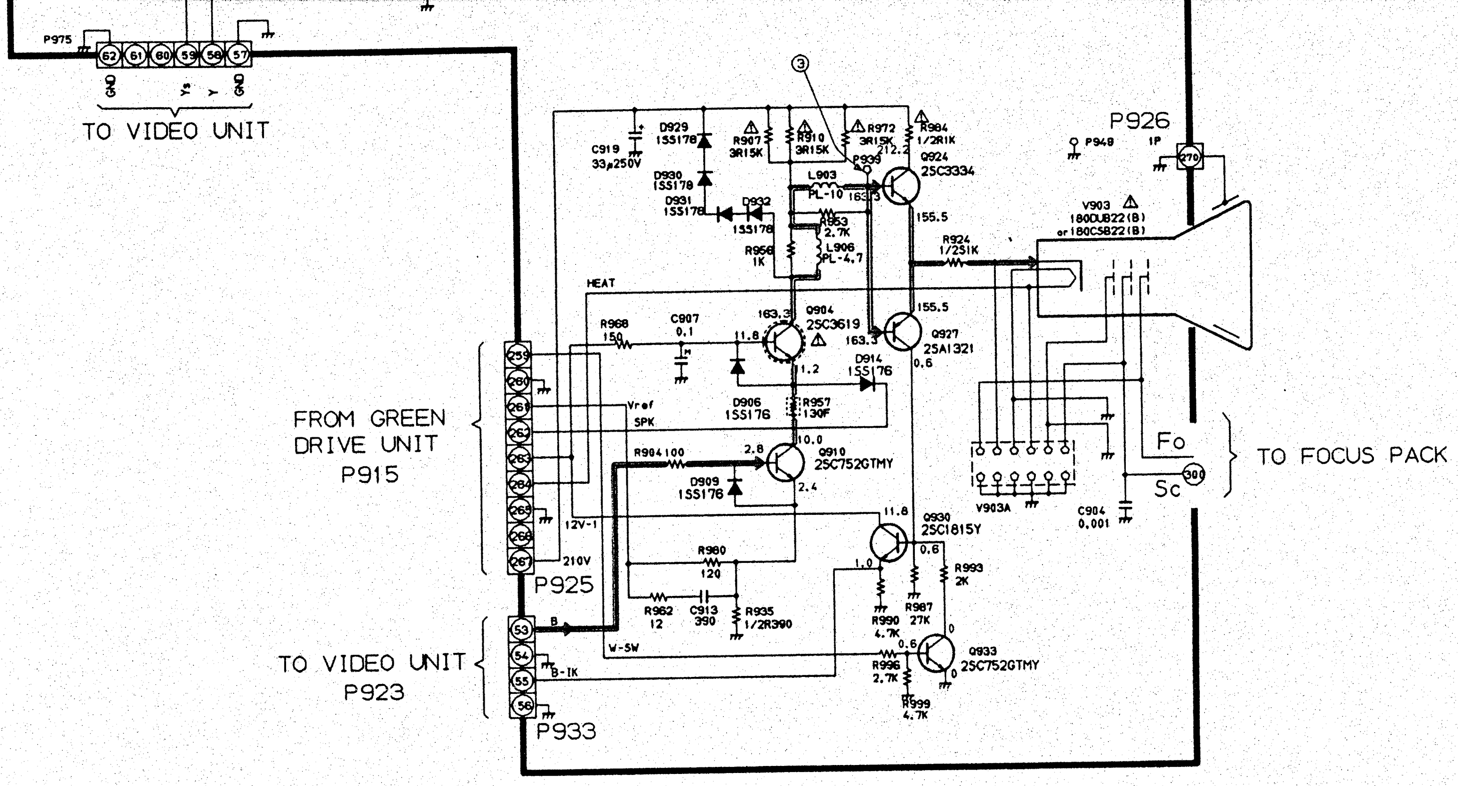

TO POWER UNIT
+15V
GND
120V
P974
BLUE DRIVE UNIT PB6883-3
Q703 2SC1815-Y
Q712 2SC1815-Y
Q718 2SC752GTMY
Q721 2SC1815-Y
Q727 2SB1186A
Q709 2SC1815-Y
Q730 2SC3298A-Y
Q724 2SA1015-Y
Q706 2SA1015-Y
Q715 2SC752GTMY
TO GREEN DRIVE UNIT
120V
GND
+15V
GND
Ys
GND
Y
P978
RETURN
DRIVE
TO BLUE VM COIL
P972
P973
P975
GND
Ys
Y
GND
TO VIDEO UNIT
P926
P949
Q924 2SC3334
Q904 2SC3619
Q927 2SA1321
Q910 2SC752GTMY
Q930 2SC1815Y
Q933 2SC752GTMY
V903 1800UB22(B) or 1800SB22(B)
V903A
HEAT
Vref
SPK
12V-1
210V
W-SW
B-IK
B
FROM GREEN DRIVE UNIT P915
P925
TO VIDEO UNIT P923
P933
Fo
Sc
TO FOCUS PACK



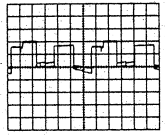
CTI Circuit

LTI Circuit


P927
P916
Q907 2SA562TMY
Q911 2SC2120Y
Q923 2SC3334
Q903 2SC3619
Q926 2SA1321
Q929 2SC1815Y
Q909 2SC752GTMY
Q932 2SC752GTMY
V902 180DUB221(G) or 180CSB221(G)
Fo
Sc
TO FOCUS PACK
W-SW
Vref
SPK
12V-1
HEAT
TO BLUE DRIVE UNIT
P925

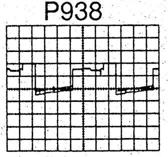

P975
GND
Ys
Y
GND
TO VIDEO UNIT
P926
P949
Q924 2SC3334
Q904 2SC3619
Q927 2SA1321
Q910 2SC752GTMY
Q930 2SC1815Y
Q933 2SC752GTMY
V903 180DUB22(B) or 180CSB22(B)
V903A
FROM GREEN DRIVE UNIT
P915
P925
TO VIDEO UNIT
P923
P933
Fo
Sc
TO FOCUS PACK

① CRT DRIVE(R)
P937



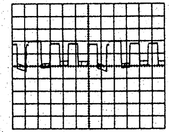
V:50V/div
H:10µs/div
[110V(p-p)]

② CRT DRIVE(G)
P938



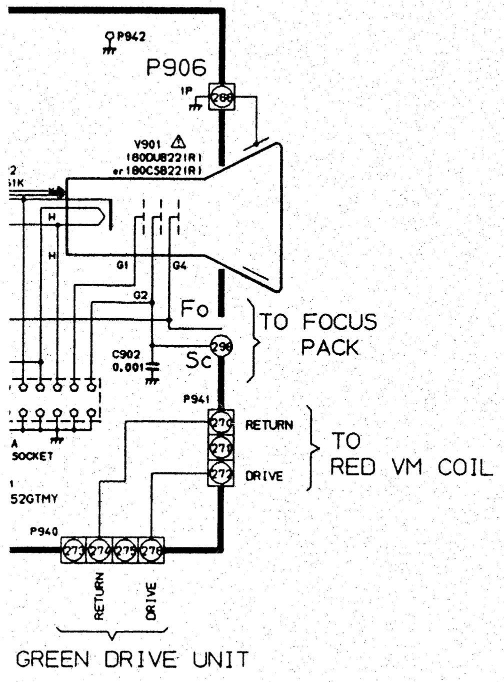
V:50V/div
H:10µs/div
[110V(p-p)]

③ CRT DRIVE(B)
P939



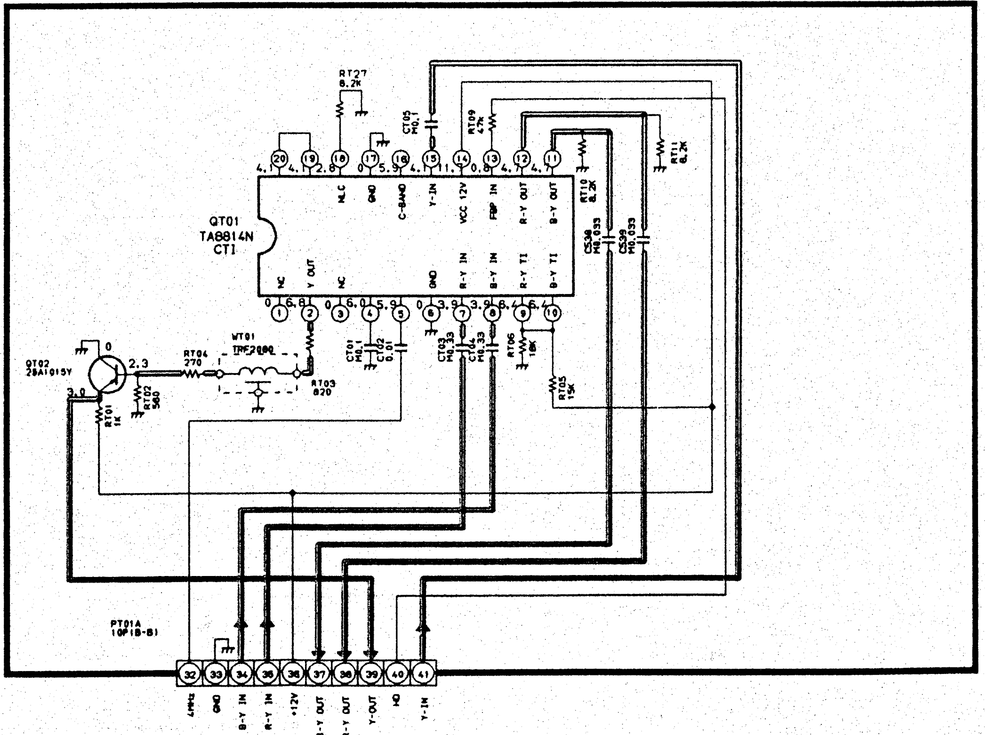
V:50V/div
H:10µs/div
[100V(p-p)]

83-1


P942
P906
V901 180DUB221(R) or 180CSB221(R)
Fo
Sc
TO FOCUS PACK
P941
RETURN
DRIVE
TO RED VM COIL
P940
RETURN
DRIVE
GREEN DRIVE UNIT

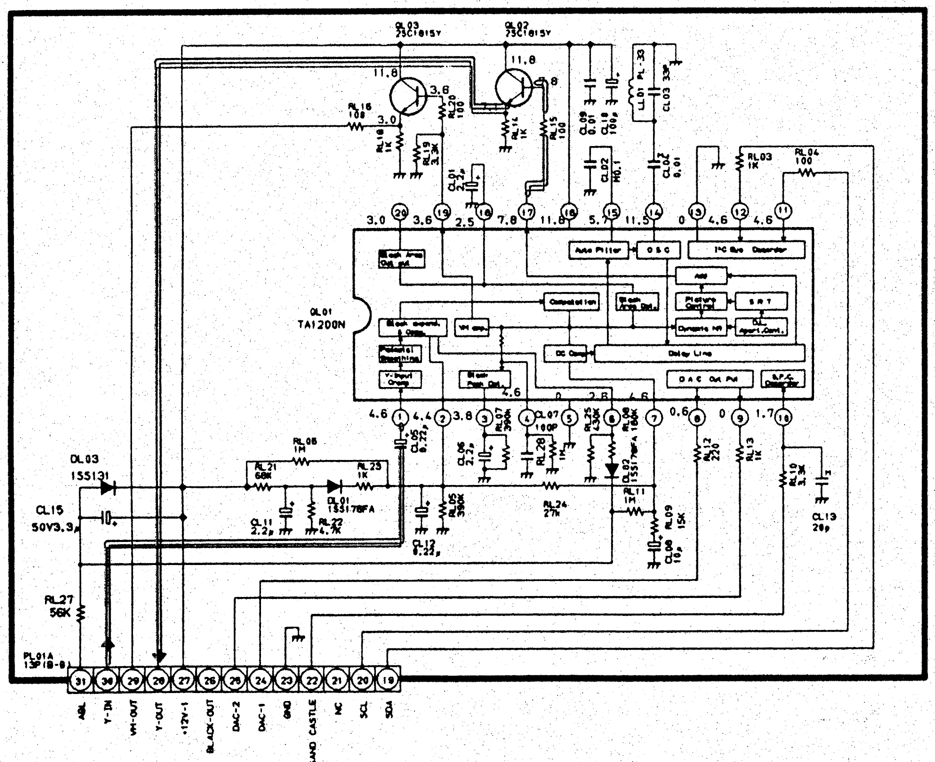
CTI Circuit
U0064

CTI BOARD PB6883-4


QT01 TA8814N CTI
QT02 2SA1015Y
WT01 TPF2808
PT01A 10P1B-B1
4MHz
GND
B-Y IN
R-Y IN
+12V
B-Y OUT
R-Y OUT
Y-OUT
NC
Y-IN

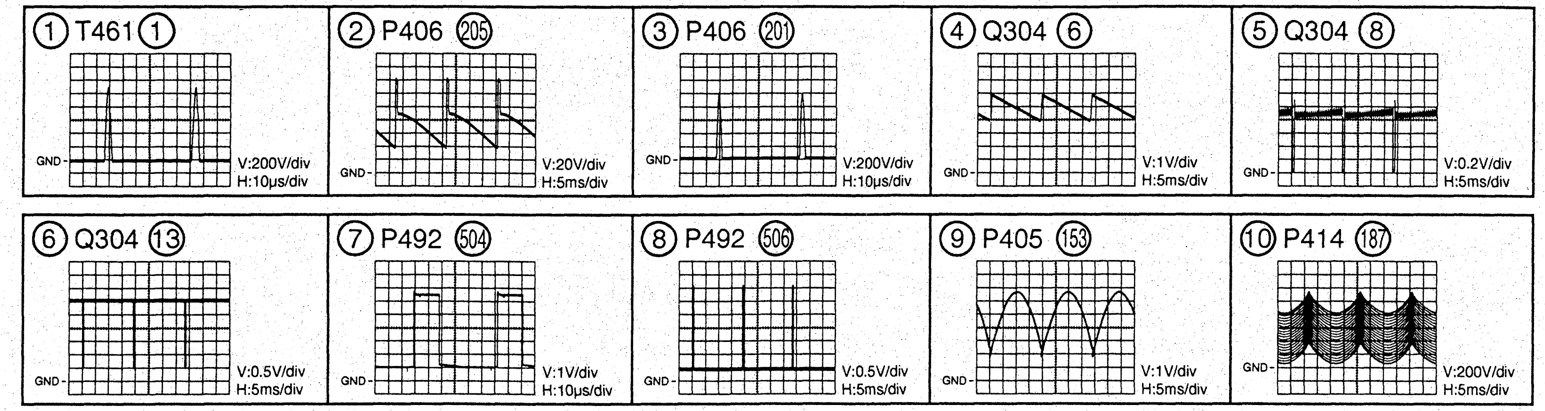
LTI Circuit
U0065

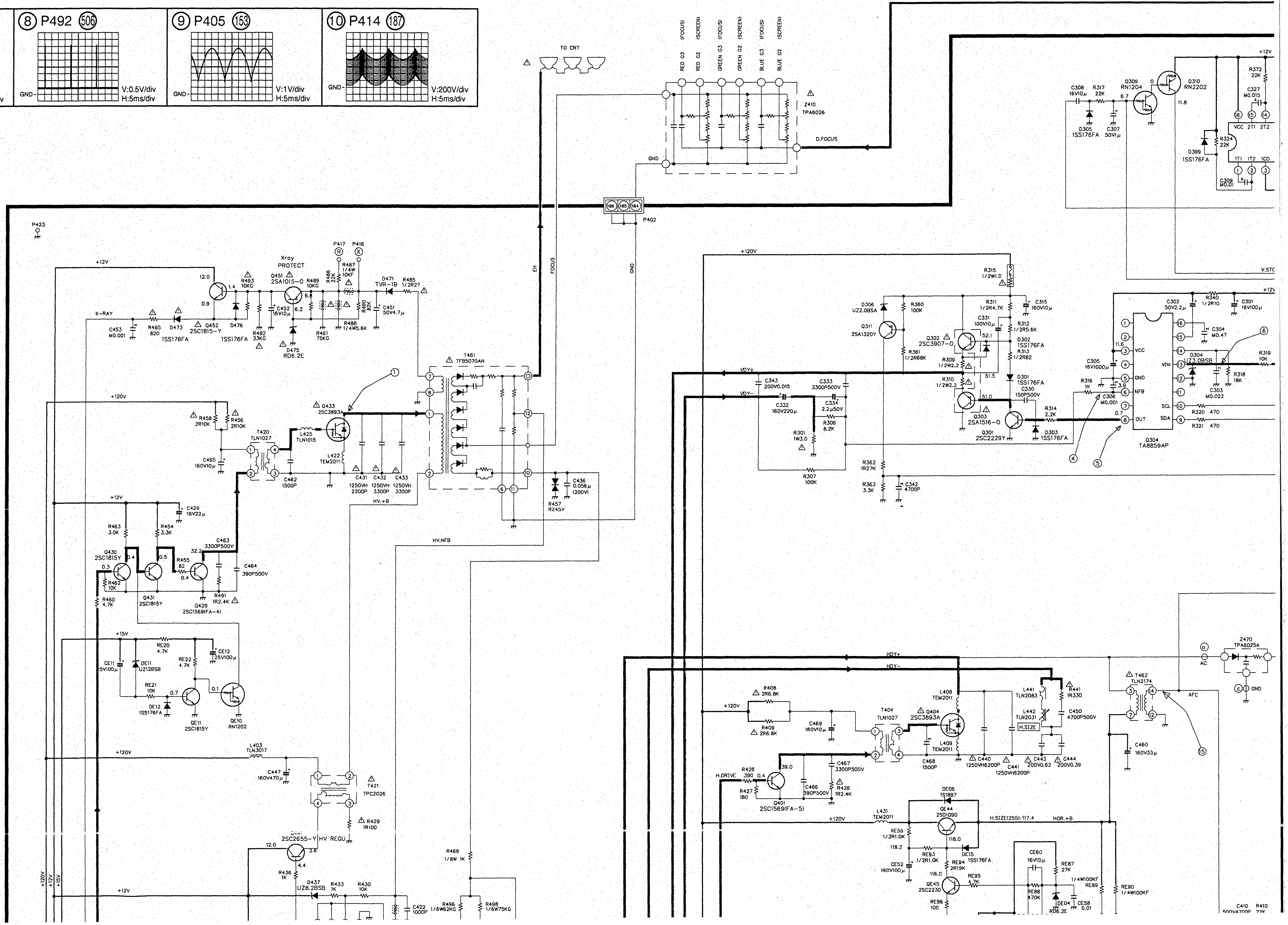
LTI BOARD PB6883-5

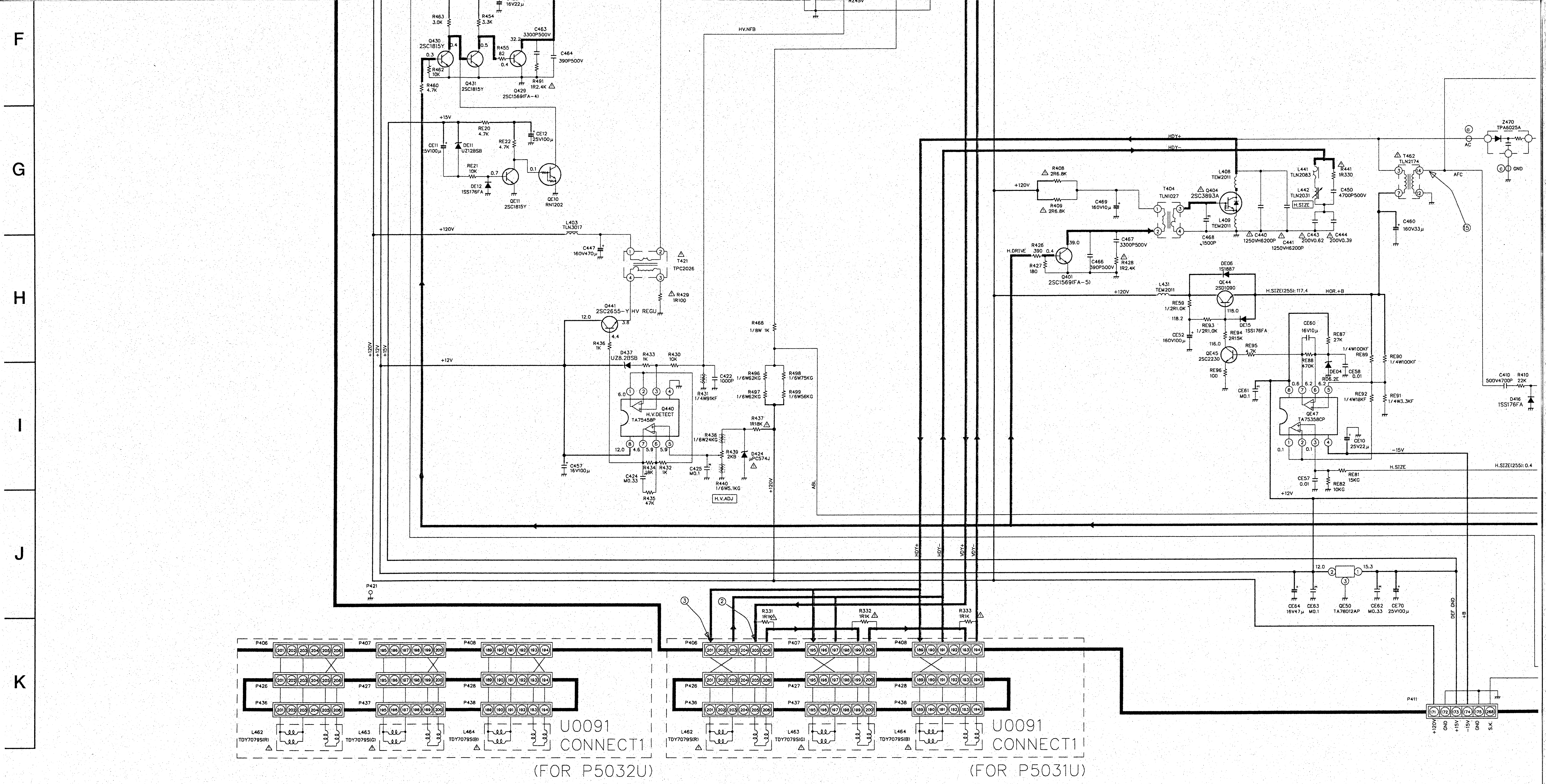

QL02 2SC1815Y
QL03 2SC1815Y
QL01 TA1200N
DL03 1SS131
PL01A 13P1B-B1
ABL
Y-IN
VM-OUT
Y-OUT
+12V-1
BLACK-OUT
DAC-2
DAC-1
GND
SAND CASTLE
NC
SCL
SDA

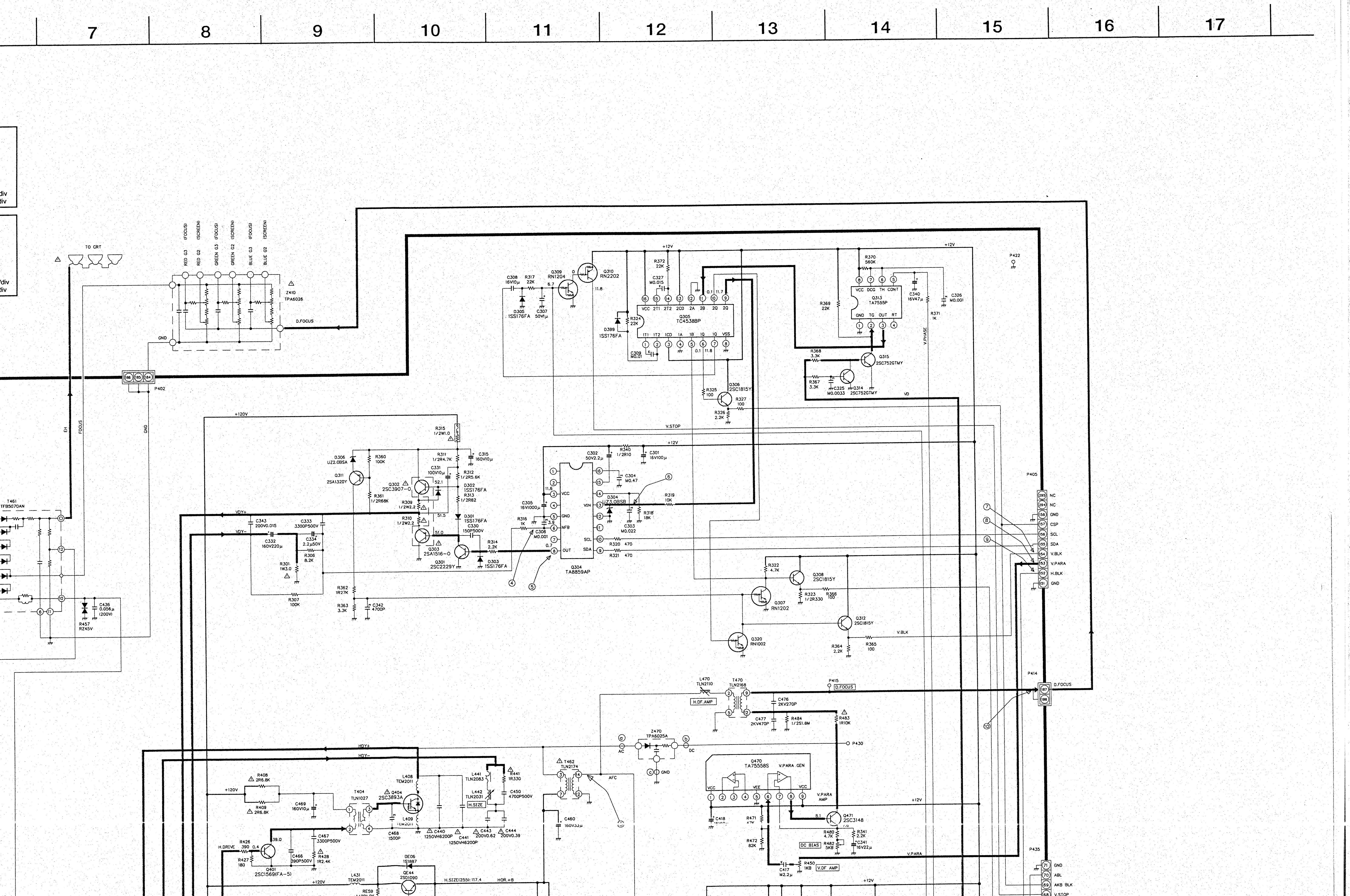
4-6. Deflection/High Voltage (DEF/HV) Circuit

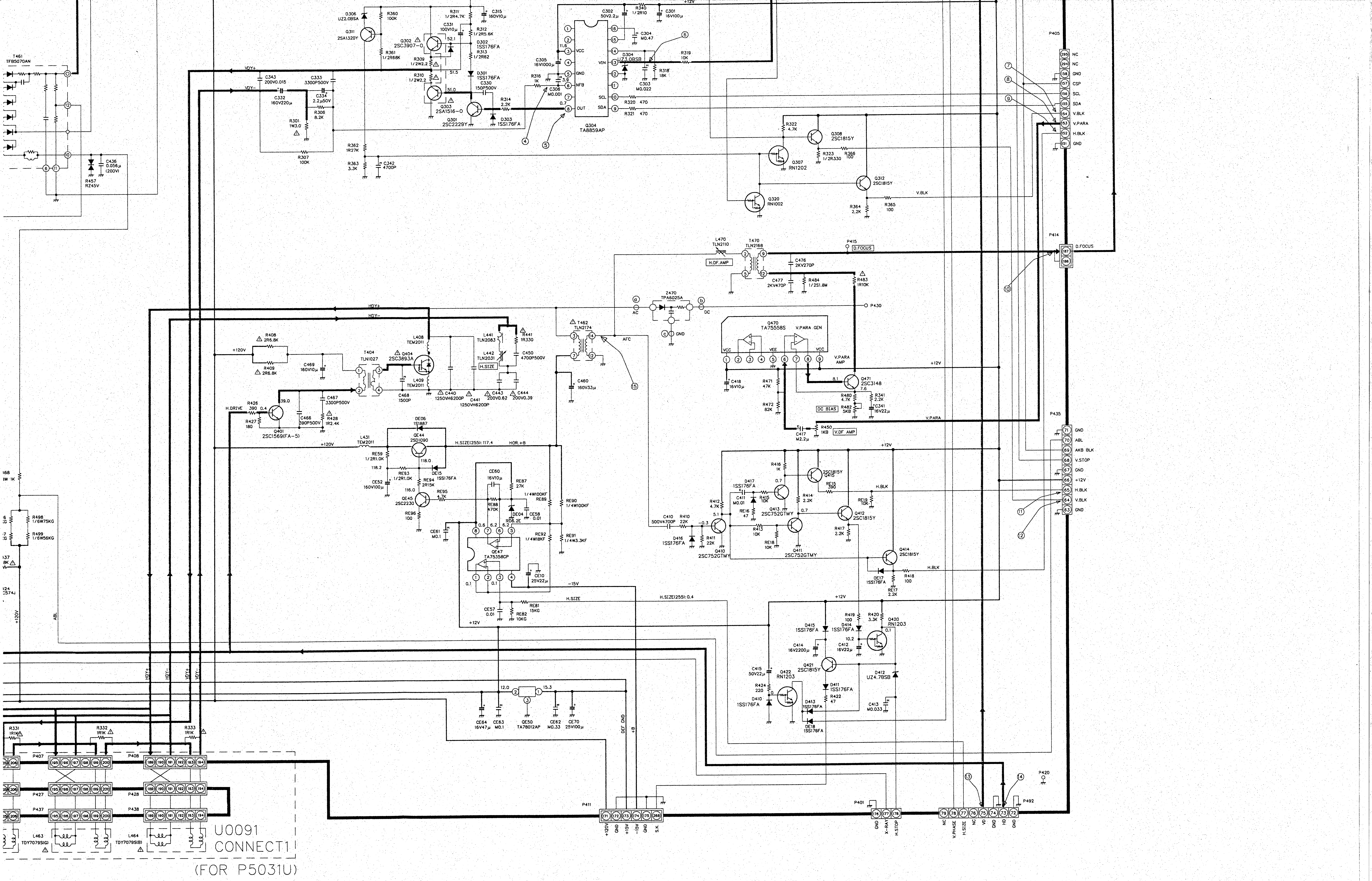
U003




1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
TO CRT
RED G3 (FOCUS)
RED G2 (SCREEN)
GREEN G3 (FOCUS)
GREEN G2 (SCREEN)
BLUE G3 (FOCUS)
BLUE G2 (SCREEN)
Z410
TPA6026
D.FOCUS
GND
P402
P423
EH
FOCUS
GND
Xray PROTECT
Q451 2SA1015-O
Q452 2SC1815-Y
X-RAY
D471 TVR-1B
R485 1/2R27
T461 TFB5070AN
Q433 2SC3893A
L425 TLN1015
T420 TLN1027
L422 TEM2011
C431 1250VH 2200P
C432 1250VH 3300P
C433 1250VH 3300P
C436 0.056µ (200V)
R457 RZ45V
HV.+B
HV.NFB
Q430 2SC1815Y
Q431 2SC1815Y
Q429 2SC1569(FA-4)
C463 3300P500V
C464 390P500V
QE10 RN1202
QE11 2SC1815Y
DE11 UZ12BSB
L403 TLN3017
T421 TPC2026
2SC2655-Y HV REGU
D437 UZ8.2BSB
R468 1/8W 1K
+12V
+120V
+15V
+120V
VDY+
VDY-
Q309 RN1204
Q310 RN2202
Q302 2SC3907-O
Q303 2SA1516-O
Q301 2SC2229Y
Q311 2SA1320Y
D306 UZ2.0BSA
Q304 TA8859AP
VCC
GND
NFB
OUT
VIN
SCL
SDA
V.STC
HDY+
HDY-
L408 TEM2011
T404 TLN1027
Q404 2SC3893A
L409 TEM2011
L441 TLN2083
L442 TLN2031
H.SIZE
T462 TLN2174
Z470 TPA6025A
AC
GND
AFC
H.DRIVE
Q401 2SC1569(FA-5)
L431 TEM2011
QE44 2SD1090
QE45 2SC2230
DE06 1S1887
H.SIZE(255):117.4
HOR.+B

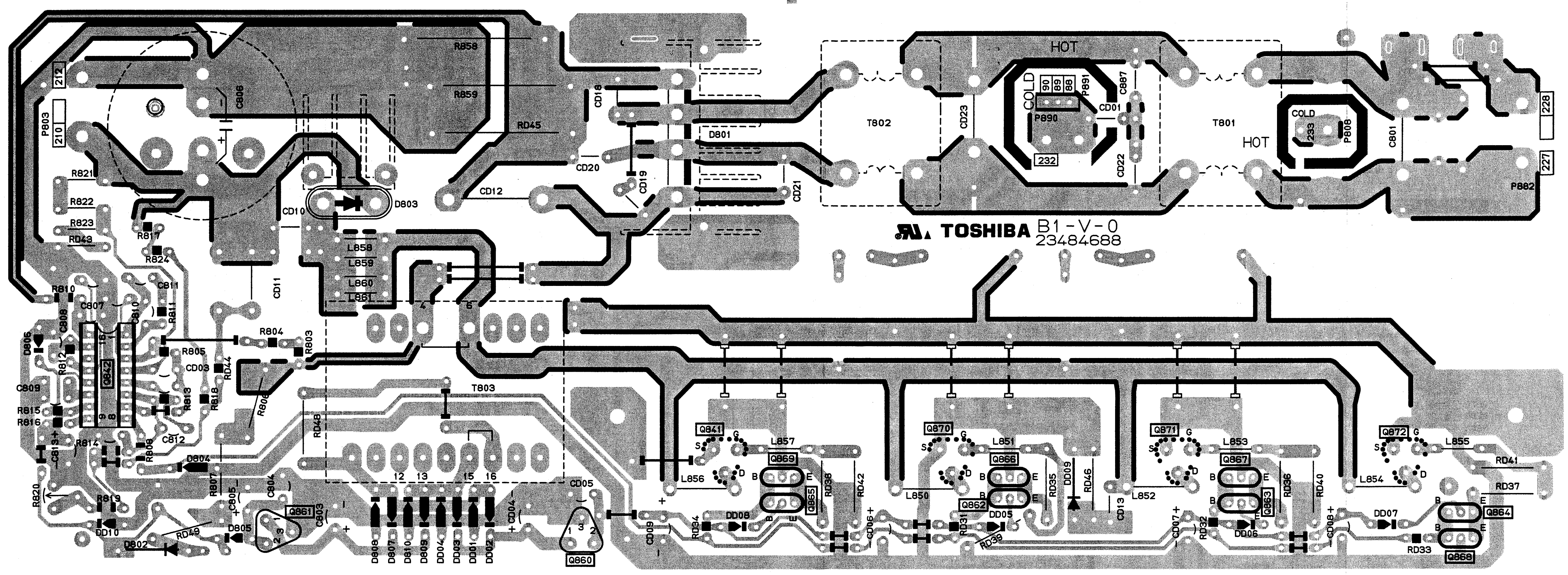

F
G
H
I
J
K
R463 3.0K
R454 3.3K
C463 3300P500V
Q430 2SC1815Y
R455 82
C464 390P500V
R462 10K
R460 4.7K
Q431 2SC1815Y
Q429 2SC1569(FA-4)
R491 1R2.4K
HV.NFB
+15V
RE20 4.7K
CE12 25V100μ
CE11 25V100μ
DE11 UZ12BSB
RE22 4.7K
RE21 10K
DE12 1SS176FA
QE11 2SC1815Y
QE10 RN1202
+120V
L403 TLN3017
C447 160V470μ
T421 TPC2026
R429 1R100
Q441 2SC2655-Y HV REGU
R436 1K
D437 UZ8.2BSB
R433 1K
R430 10K
+12V
C422 1000P
R431 1/4W91KF
Q440 H.V.DETECT TA75458P
R468 1/8W 1K
R496 1/6W62KG
R497 1/6W62KG
R498 1/6W75KG
R499 1/6W56KG
R437 1R18K
R438 1/6W24KG
R439 2KB
D424 μPC574J
C457 16V100μ
C424 M0.33
R434 18K
R432 1K
R435 47K
C425 M0.1
R440 1/6W5.1KG
H.V.ADJ
ABL
P421
HDY+
HDY−
VDY+
VDY−
R408 2R6.8K
R409 2R6.8K
C469 160V10μ
T404 TLN1027
Q404 2SC3893A
L408 TEM2011
L409 TEM2011
C467 3300P500V
C466 390P500V
R428 1R2.4K
C468 1500P
C440 1250VH6200P
C441 1250VH6200P
C443 200V0.62
C444 200V0.39
L441 TLN2083
L442 TLN2031
H.SIZE
R441 1R330
C450 4700P500V
T462 TLN2174
AFC
C460 160V33μ
Z470 TPA6025A
AC
GND
H.DRIVE
R426 390
R427 180
Q401 2SC1569(FA-5)
L431 TEM2011
DE06 1S1887
QE44 2SD1090
H.SIZE(255): 117.4
HOR.+B
RE58 1/2R1.0K
RE93 1/2R1.0K
CE52 160V100μ
RE94 2R15K
DE15 1SS176FA
RE95 4.7K
QE45 2SC2230
RE96 100
CE61 M0.1
CE60 16V10μ
RE87 27K
RE88 470K
RE89 1/4W100KF
DE04 RD6.2E
CE58 0.01
RE90 1/4W100KF
RE92 1/4W18KF
RE91 1/4W3.3KF
QE47 TA75358CP
CE10 25V22μ
−15V
C410 500V4700P
R410 22K
D416 1SS176FA
H.SIZE
H.SIZE(255): 0.4
RE81 15KG
RE82 10KG
CE57 0.01
CE64 16V47μ
CE63 M0.1
QE50 TA78012AP
CE62 M0.33
CE70 25V100μ
DEF GND
+B
R331 1R1K
R332 1R1K
R333 1R1K
P406
P407
P408
P426
P427
P428
P436
P437
P438
P411
+120V
GND
+15V
−15V
S.K
L462 TDY7079S(R)
L463 TDY7079S(G)
L464 TDY7079S(B)
U0091 CONNECT1
(FOR P5032U)
U0091 CONNECT1
(FOR P5031U)


7
8
9
10
11
12
13
14
15
16
17
TO CRT
RED G3 (FOCUS)
RED G2 (SCREEN)
GREEN G3 (FOCUS)
GREEN G2 (SCREEN)
BLUE G3 (FOCUS)
BLUE G2 (SCREEN)
Z410
TPA6026
D.FOCUS
GND
P402
EH
FOCUS
T461
TFB5070AN
C436 0.056μ (200V)
R457 RZ45V
+120V
VDY+
VDY-
C343 200V0.015
C333 3300P500V
C332 160V220μ
C334 2.2μ50V
R306 8.2K
R301 1W3.0
R307 100K
D306 UZ2.0BSA
Q311 2SA1320Y
R360 100K
R361 1/2R68K
R362 1R27K
R363 3.3K
C342 4700P
R315 1/2W1.0
R311 1/2R4.7K
C315 160V10μ
C331 100V10μ
R312 1/2R5.6K
D302 1SS176FA
R313 1/2R82
Q302 2SC3907-O
R309 1/2W2.2
R310 1/2W2.2
D301 1SS176FA
C330 150P500V
Q303 2SA1516-O
Q301 2SC2229Y
R314 2.2K
D303 1SS176FA
Q304 TA8859AP
VCC
GND
NFB
OUT
VIN
SCL
SDA
C302 50V2.2μ
R340 1/2R10
C301 16V100μ
+12V
C305 16V1000μ
C304 M0.47
D304 UZ3.0BSB
R319 10K
R318 18K
C303 M0.022
R316 1K
C306 M0.001
R320 470
R321 470
C308 16V10μ
R317 22K
D305 1SS176FA
C307 50V1μ
Q309 RN1204
Q310 RN2202
R372 22K
C327 M0.015
Q305 TC4538BP
R324 22K
D399 1SS176FA
C309 M0.01
R325 100
Q306 2SC1815Y
R327 100
R326 2.2K
V.STOP
R370 560K
Q313 TA7555P
C340 16V47μ
C326 M0.001
R369 22K
R371 1K
V.PHASE
R368 3.3K
Q315 2SC752GTMY
R367 3.3K
C325 M0.0033
Q314 2SC752GTMY
VD
P422
P405
NC
CSP
SCL
SDA
V.BLK
V.PARA
H.BLK
R322 4.7K
Q308 2SC1815Y
R323 1/2R330
R366 100
Q307 RN1202
Q312 2SC1815Y
Q320 RN1002
R364 2.2K
R365 100
P414
P415
L470 TLN2110
T470 TLN2168
H.DF.AMP
C476 2KV270P
C477 2KV470P
R484 1/2S1.8M
R483 1R10K
Z470 TPA6025A
AC
DC
P430
HDY+
HDY-
R408 2R6.8K
R409 2R6.8K
C469 160V10μ
T404 TLN1027
L408 TEM2011
Q404 2SC3893A
L441 TLN2083
L442 TLN2031
H.SIZE
R441 1R330
C450 4700P500V
T462 TLN2174
AFC
C460 160V33μ
L409 TEM2011
C468 1500P
C440 1250VH6200P
C441 1250VH6200P
C443 200V0.62
C444 200V0.39
C467 3300P500V
C466 390P500V
R428 1R2.4K
R426 390
R427 180
H.DRIVE
Q401 2SC1569(FA-5)
L431 TEM2011
D406 1S1887
Q444 2SD1090
H.SIZE(255):117.4
HOR.+B
Q470 TA75558S
V.PARA GEN
V.PARA AMP
VEE
C418
R471
R472 82K
Q471 2SC3148
R480 4.7K
R482 5KB
DC BIAS
R341 2.2K
C341 16V22μ
C417 M2.2μ
R450 1KB
V.DF AMP
P435
ABL
AKB BLK
V.STOP

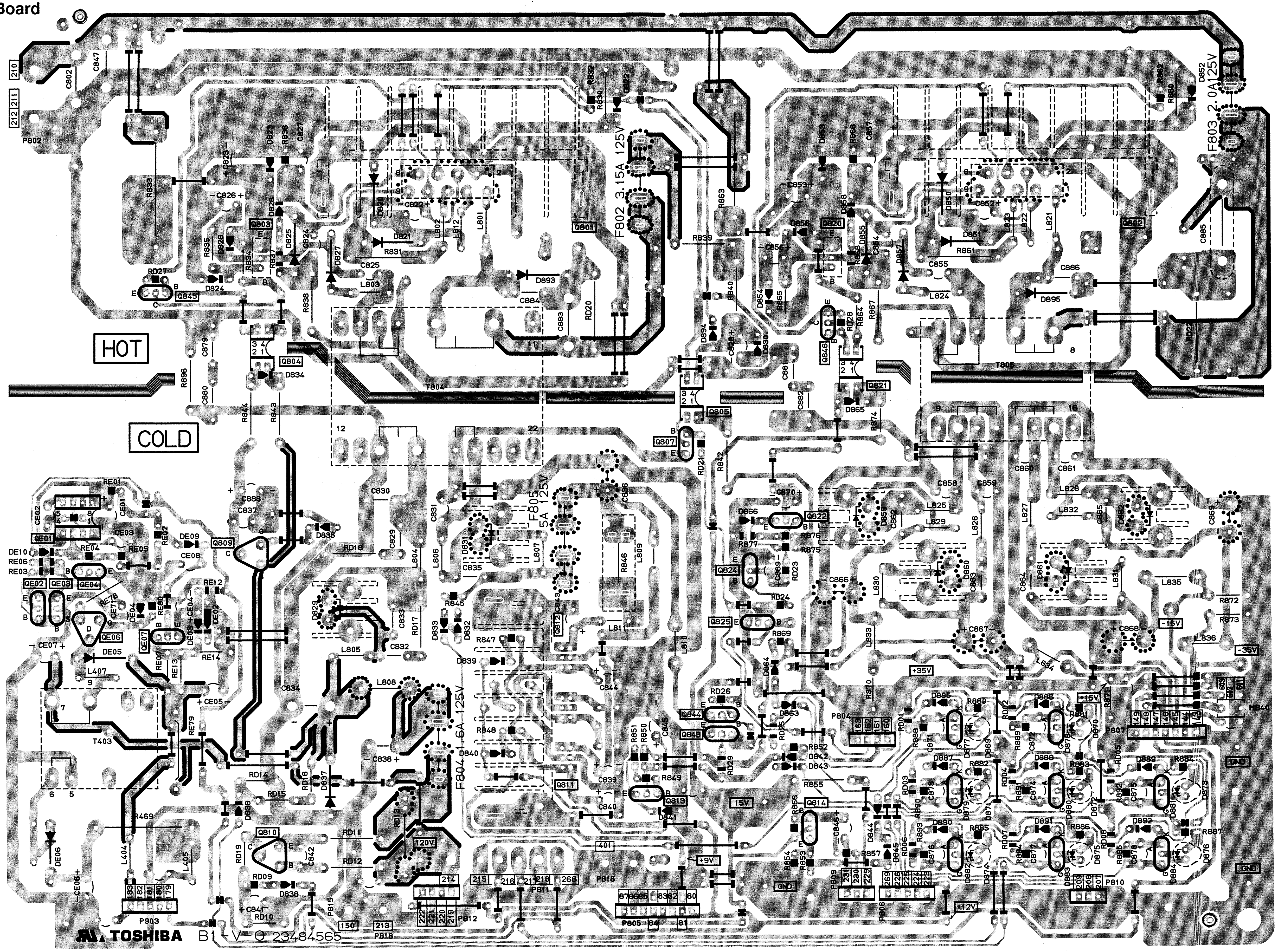

T461
TFB5070AN
R457
RZ45V
C436
0.056µ
(200V)
VDY+
VDY−
C343
200V0.015
C333
3300P500V
C332
160V220µ
C334
2.2µ50V
R306
8.2K
R301
1W3.0
R307
100K
R362
1R27K
R363
3.3K
C342
4700P
D306
UZ2.0BSA
R360
100K
Q311
2SA1320Y
R311
1/2R4.7K
C315
160V10µ
C331
100V10µ
R312
1/2R5.6K
Q302
2SC3907−O
D302
1SS176FA
R313
1/2R82
R361
1/2R68K
R309
1/2W2.2
R310
1/2W2.2
D301
1SS176FA
C330
150P500V
Q303
2SA1516−O
Q301
2SC2229Y
R314
2.2K
D303
1SS176FA
C305
16V1000µ
R316
1K
C306
M0.001
Q304
TA8859AP
VCC
GND
NFB
OUT
VIN
SCL
SDA
C302
50V2.2µ
R340
1/2R10
C301
16V100µ
C304
M0.47
D304
UZ3.0BSB
C303
M0.022
R318
18K
R319
10K
R320 470
R321 470
+12V
R322
4.7K
Q308
2SC1815Y
Q307
RN1202
R323
1/2R330
R366
100
Q312
2SC1815Y
Q320
RN1002
R364
2.2K
R365
100
V.BLK
P405
NC
NC
GND
CSP
SCL
SDA
V.BLK
V.PARA
H.BLK
GND
P414
D.FOCUS
L470
TLN2110
T470
TLN2168
H.DF.AMP
P415
D.FOCUS
C476
2KV270P
C477
2KV470P
R484
1/2S1.8M
R483
1R10K
Z470
TPA6025A
AC
DC
GND
P430
Q470
TA75558S
V.PARA GEN
VCC
VEE
V.PARA
AMP
C418
16V10µ
R471
47K
R472
82K
Q471
2SC3148
R480
4.7K
R482
5KB
R341
2.2K
C341
16V22µ
DC BIAS
C417
M2.2µ
R450
1KB
V.DF AMP
V.PARA
HDY+
HDY−
R408
2R6.8K
R409
2R6.8K
+120V
C469
160V10µ
T404
TLN1027
Q404
2SC3893A
L408
TEM2011
L409
TEM2011
L441
TLN2083
L442
TLN2031
H.SIZE
R441
1R330
C450
4700P500V
C468
1500P
C440
1250VH6200P
C441
1250VH6200P
C443
200V0.62
C444
200V0.39
C467
3300P500V
C466
390P500V
R428
1R2.4K
H.DRIVE
R426
390
R427
180
Q401
2SC1569(FA−5)
T462
TLN2174
AFC
C460
160V33µ
L431
TEM2011
DE06
1S1887
QE44
2SD1090
H.SIZE(255): 117.4
HOR.+B
RE59
1/2R1.0K
RE93
1/2R1.0K
DE15
1SS176FA
RE94
2R15K
CE52
160V100µ
RE95
4.7K
QE45
2SC2230
RE96
100
CE61
M0.1
CE60
16V10µ
RE87
27K
RE88
470K
DE04
RD6.2E
CE58
0.01
RE89
1/4W100KF
RE90
1/4W100KF
RE92
1/4W18KF
RE91
1/4W3.3KF
QE47
TA75358CP
CE10
25V22µ
−15V
H.SIZE
CE57
0.01
RE81
15KG
RE82
10KG
+12V
H.SIZE(255): 0.4
C410
500V4700P
R410
22K
D416
1SS176FA
R411
22K
Q410
2SC752GTMY
R412
4.7K
D417
1SS176FA
C411
M0.01
R415
10K
RE16
47
R413
10K
RE18
10K
Q413
2SC752GTMY
Q411
2SC752GTMY
R416
1K
Q415
2SC1815Y
R414
2.2K
RE15
390
H.BLK
RE19
10K
Q412
2SC1815Y
R417
2.2K
Q414
2SC1815Y
DE17
1SS176FA
R418
100
RE17
2.2K
P435
GND
ABL
AKB BLK
V.STOP
GND
+12V
H.BLK
V.BLK
GND
D415
1SS176FA
D414
1SS176FA
R419
100
R420
3.3K
Q420
RN1203
C414
16V2200µ
C412
16V22µ
Q421
2SC1815Y
D412
UZ4.7BSB
C415
50V22µ
Q422
RN1203
R424
220
D410
1SS176FA
D411
1SS176FA
R422
47
D413
1SS176FA
DE18
1SS176FA
C413
M0.033
CE64
16V47µ
CE63
M0.1
QE50
TA78012AP
CE62
M0.33
CE70
25V100µ
DEF GND
+B
P411
+120V
GND
+15V
−15V
GND
S.K
P401
GND
X−RAY
H.STOP
P420
P492
NC
V.PHASE
H.SIZE
NC
VD
GND
HD
GND
ABL
+120V
R331
1R1K
R332
1R1K
R333
1R1K
P407
P408
P427
P428
P437
P438
L463
TDY7079S(G)
L464
TDY7079S(B)
U0091
CONNECT1
(FOR P5031U)

5. PC BOARDS

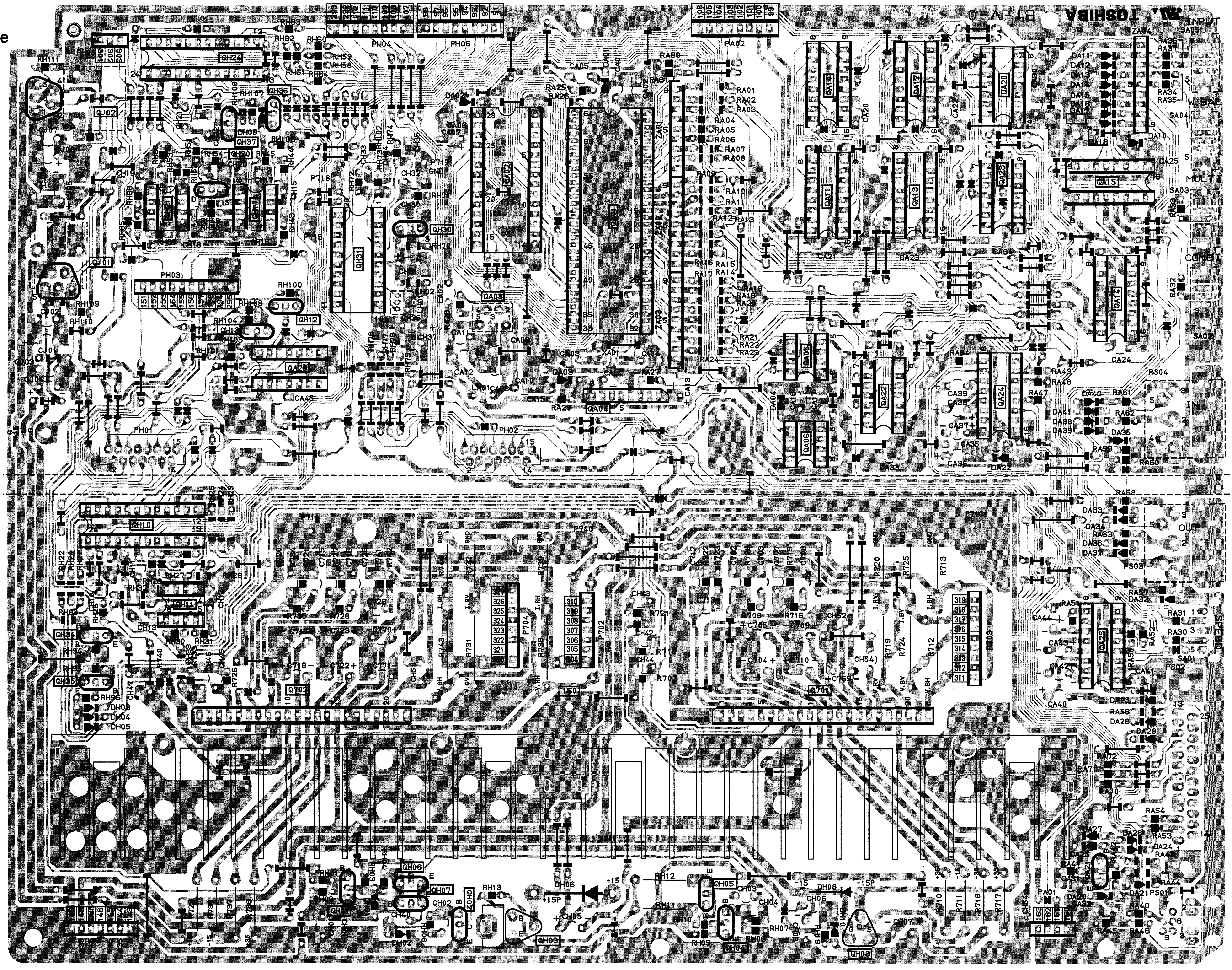
5-1. SUB Power PC Board (U002)


212
210
P803
C806
R858
R859
RD45
CD18
CD20
CD19
D801
CD21
T802
HOT
COLD
CD23
P890
232
CD01
C887
P891
CD22
T801
HOT
COLD
233
P808
C801
228
227
P862
R821
R822
R823
RD43
R817
R824
CD10
D803
CD12
L858
L859
L860
L861
TOSHIBA B1-V-0
23484688
CD11
R810
C807
C811
C808
C810
R811
D806
R812
Q842
R804
R805
R803
CD03
RD44
C809
R815
R816
R813
R818
R806
C812
RD48
T803
C813
R814
R809
D804
R807
R820
R813
D810
DD10
D802
RD49
C805
C804
D805
Q861
C803
12 13 15 16
D808
D807
D810
D809
DD04
DD03
DD01
DD02
CD04
CD05
Q860
CD09
Q841
L857
Q869
L856
Q865
RD38
RD42
RD34
DD08
Q870
L851
Q866
DD09
RD35
RD46
L850
Q862
DD05
RD31
RD39
CD06
CD13
Q871
L853
Q867
L852
Q863
RD36
RD40
RD32
DD06
CD07
CD08
Q872
L855
L854
RD41
RD37
DD07
Q864
RD33
Q868

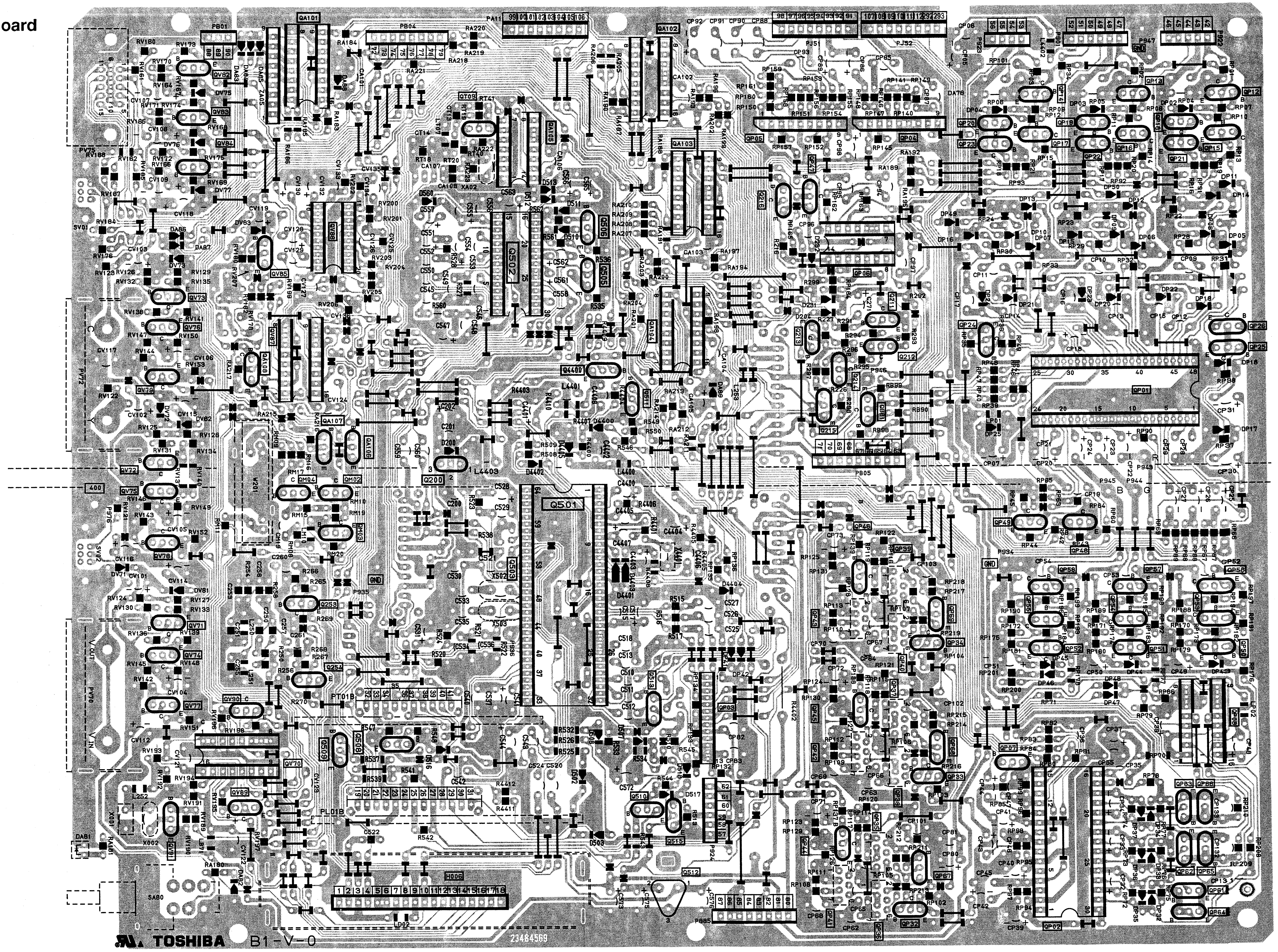
5-2. Power PC Board (U001)


HOT
COLD
F802 3.15A 125V
F803 2.0A 125V
F804 1.6A 125V
F805 5A 125V
T804
T805
T403
Q801
Q802
Q803
Q804
Q805
Q807
Q809
Q810
Q811
Q812
Q813
Q814
Q820
Q821
Q822
Q824
Q825
Q843
Q844
Q845
Q846
P802
P804
P805
P806
P807
P809
P810
P811
P812
P815
P816
P818
P903
M840
+35V
+15V
15V
-15V
-35V
+9V
+12V
120V
GND
TOSHIBA B1-V-0 23484565

5-3. Control / Convergence PC Board (U005)

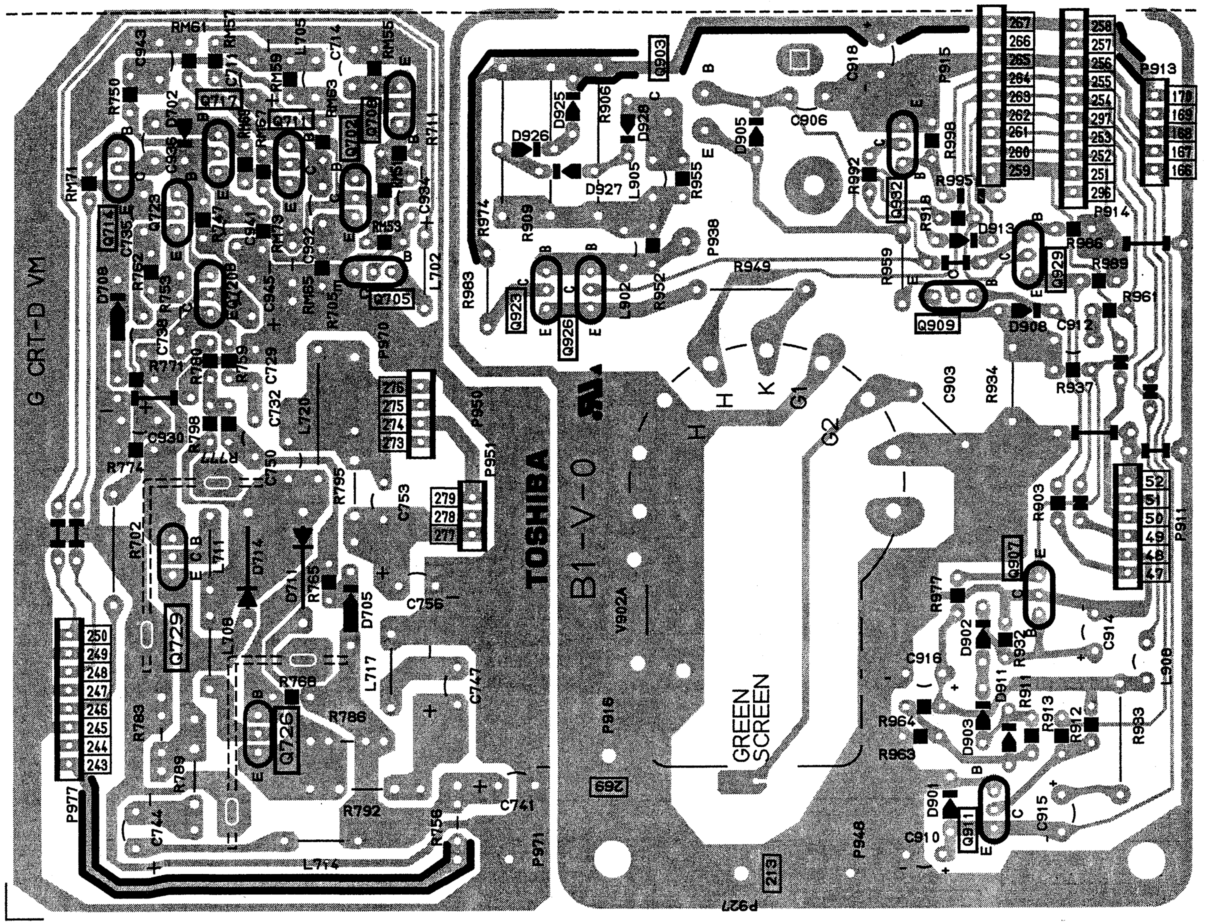

TOSHIBA
B1-V-0
INPUT
SA05
W.BAL
SA04
MULTI
SA03
COMBI
SA02
PS04
IN
OUT
PS03
SPEED
SA01
PS02
PS01

5-4. Video PC Board (U004)

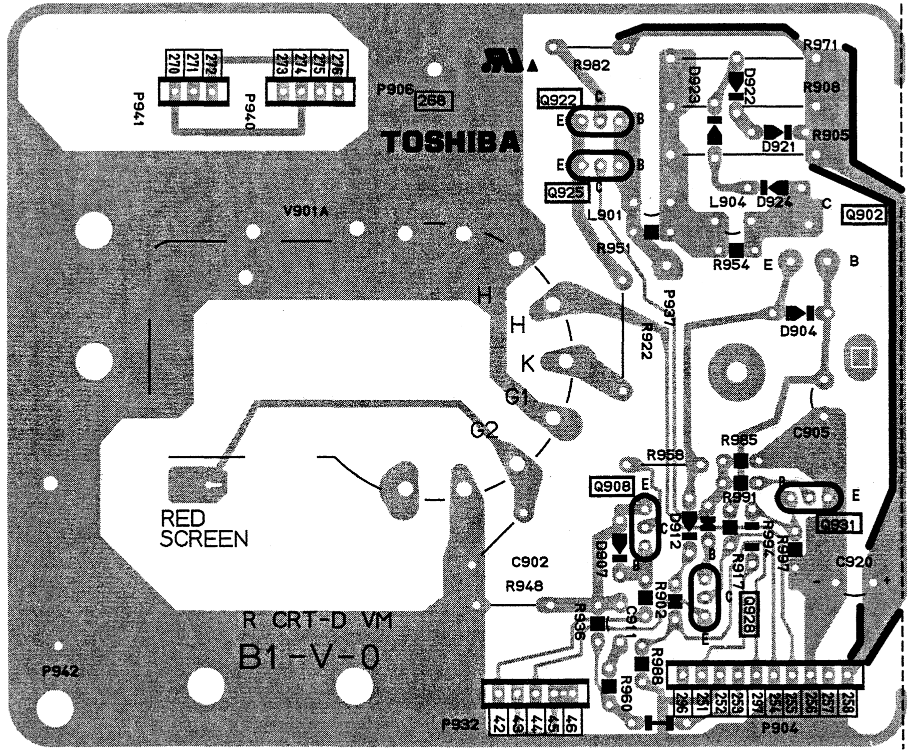

TOSHIBA
B1-V-0
23484569
Q501
Q502
QP01
PB805
PB01
PB04
V IN
V OUT
GND

5-5. CRT Drive (R, G, B) / LTI / CTI / CONECT1 / CONECT2 PC Board

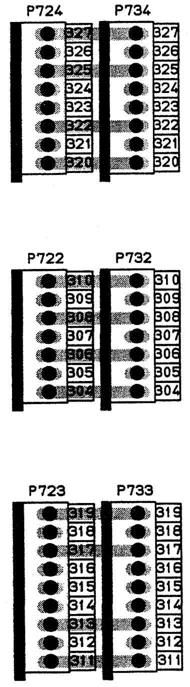
CRT Drive (G) PC Board (U0062)


G CRT-D VM
B1-V-0
TOSHIBA
GREEN SCREEN
V902A
H
K
G1
G2
P977
P971
P927
P916
P948

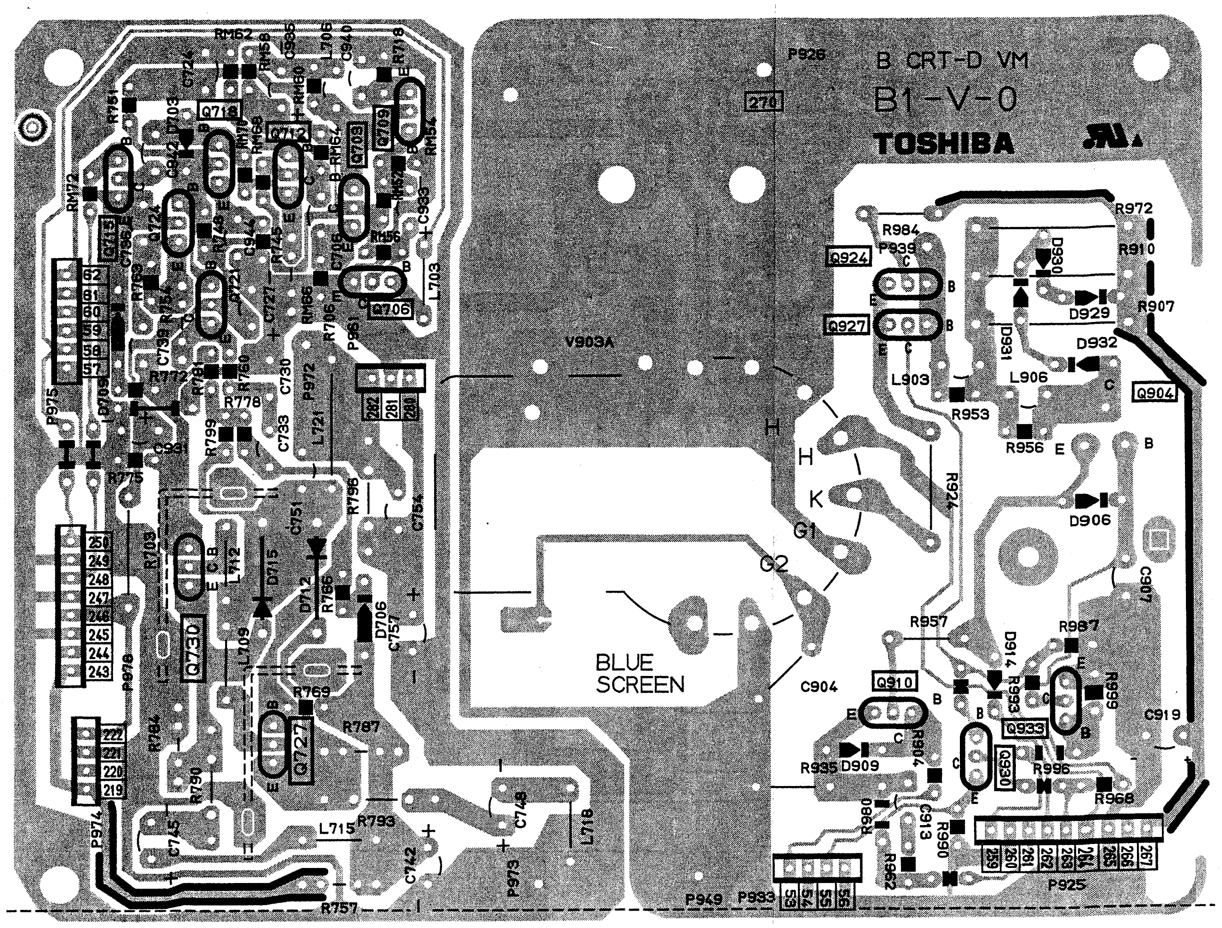
CRT Drive (R) PC Board (U0061)


TOSHIBA
V901A
RED SCREEN
R CRT-D VM
B1-V-0
H
K
G1
G2
P941
P940
P906
P942
P932
P904

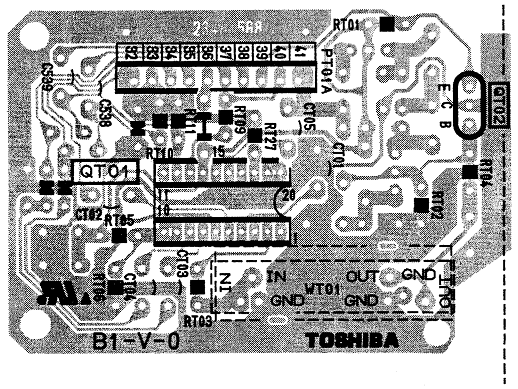
CONECT2 Board (U0092)


P724
P734
P722
P732
P723
P733

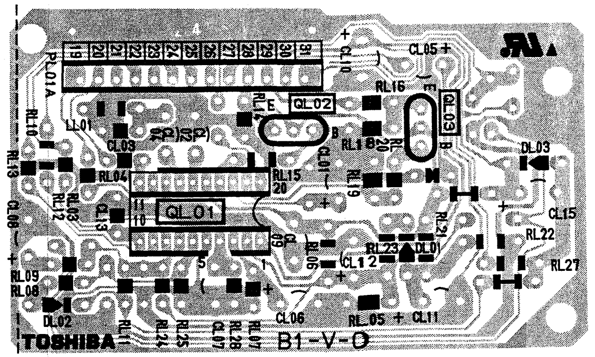
CRT Drive (B) PC Board (U0063)


B CRT-D VM
B1-V-0
TOSHIBA
P926
V903A
BLUE SCREEN
H
K
G1
G2
P975
P974
P973
P949
P933
P925

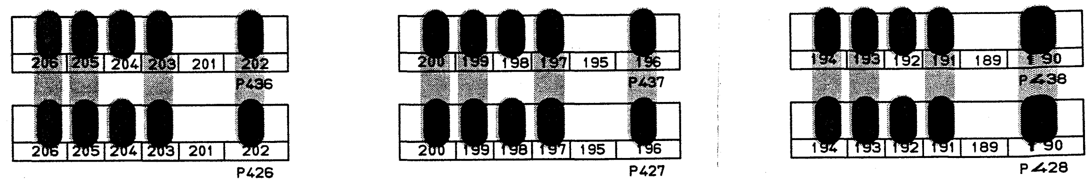
CTI PC Board (U0064)


QT01
QT02
IN
OUT
GND
B1-V-0
TOSHIBA

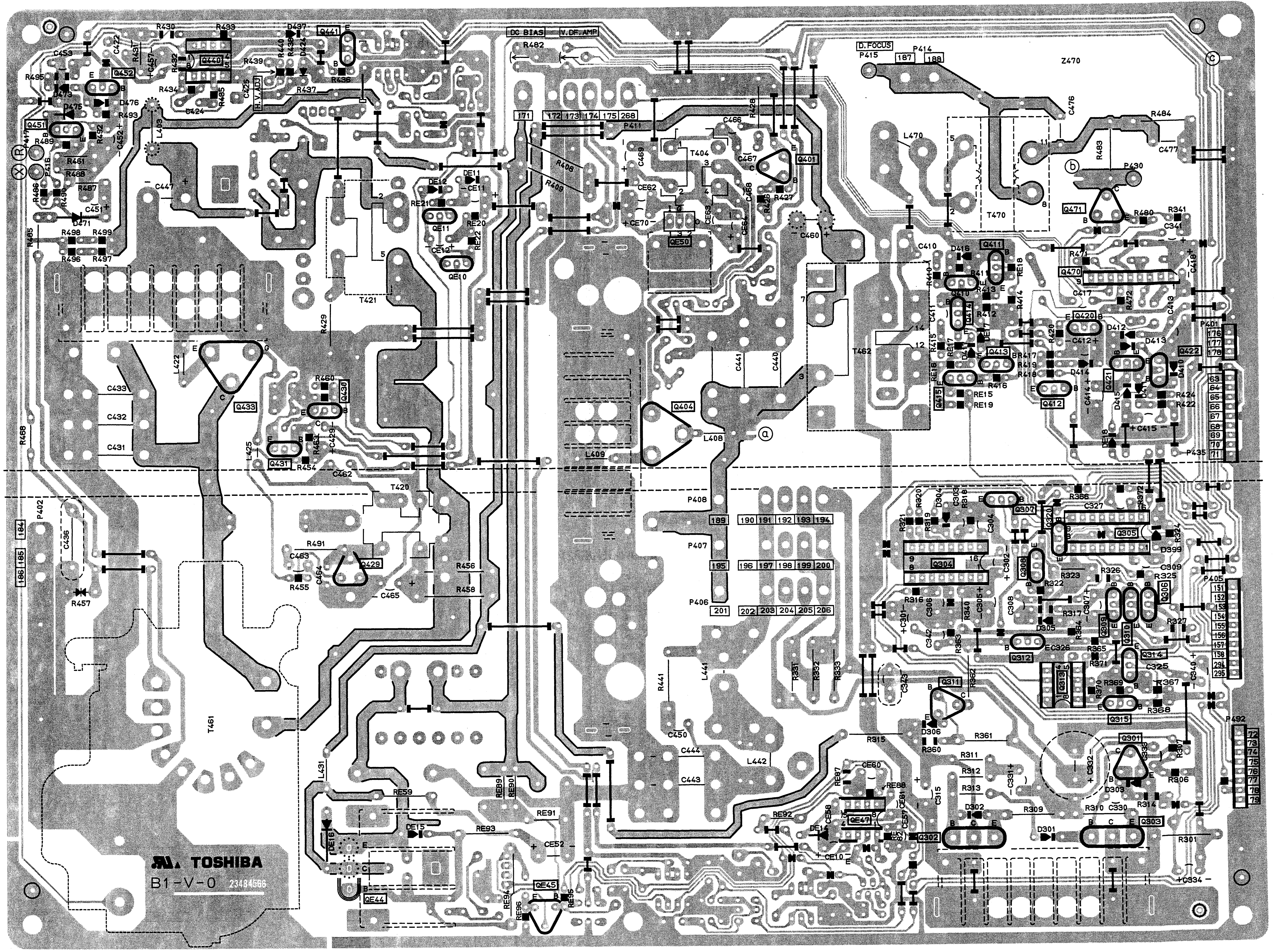
LTI PC Board (U0065)


QL01
QL02
QL03
TOSHIBA
B1-V-0

CONECT1 Board (U0091)


P436
P426
P437
P427
P438
P428

5-6. Deflection / High Voltage (DEF/HV) PC Board (U003)


DC BIAS
V.DF.AMP
D.FOCUS
H.V.ADJ
Z470
T470
T404
T421
T420
T462
T461
L470
P401
P405
P492
P402
P406
P407
P408
P411
P414
P415
P430
P435
Q401
Q404
Q433
Q429
Q301
Q303
Q302
TOSHIBA
B1-V-0
23484566

SECTION 4
EXPLODED VIEW AND PARTS LIST

SAFETY PRECAUTION

The parts identified by ⚠ mark are critical for safety. Replace only with part number specified.

The mounting position of replacement is to be identical with originals.

The substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

NOTICE

The part number must be used when ordering parts in order to assist in processing, be sure to include the model number and description.

ABBREVIATIONS

1. **Integrated Circuit (IC)**
2. **Capacitor (Cap)**

- **Capacitance Tolerance (for Nominal Capacitance more than 10pF)**

Symbol	B	C	D	F	G	J	K	M	N
Tolerance %	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10	± 20	± 30

Symbol	P	Q	T	U	V	W	X	Y	Z
Tolerance %	+ 100 0	+ 30 − 10	+ 50 − 10	+ 75 − 10	+ 20 − 10	+ 100 − 10	+ 40 − 20	+ 150 − 10	+ 80 − 20

Ex. 10μF J = 10μF ± 5%

- **Capacitance Tolerance (for Nominal Capacitance 10pF or less)**

Symbol	B	C	D	F	G
Tolerance pF	± 0.1	± 0.25	± 0.5	± 1	± 2

Ex. 10pF G = 10pF ± 2pF

3. **Resistor (Res)**

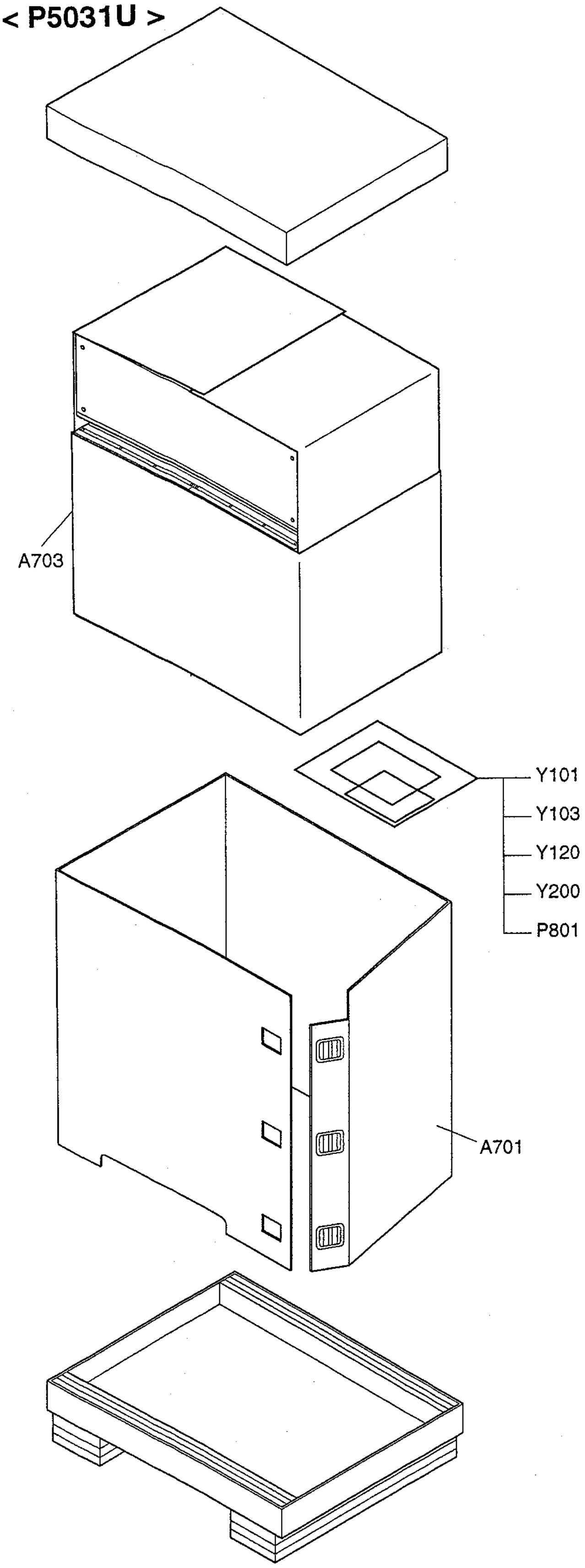
- **Resistance tolerance**

Symbol	B	C	D	F	G	J	K	M
Tolerance %	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10	± 20

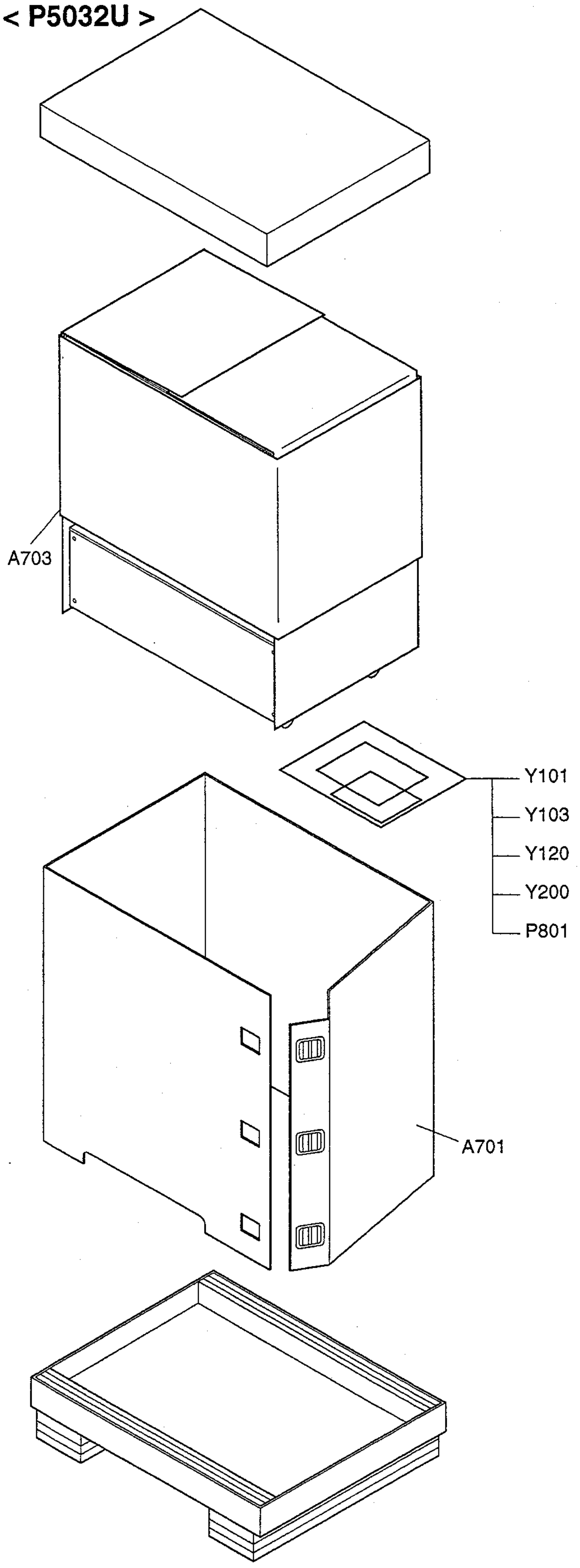
Ex. 470Ω J = 470Ω ± 5%

4. PACKING ASSEMBLY

< P5031U >

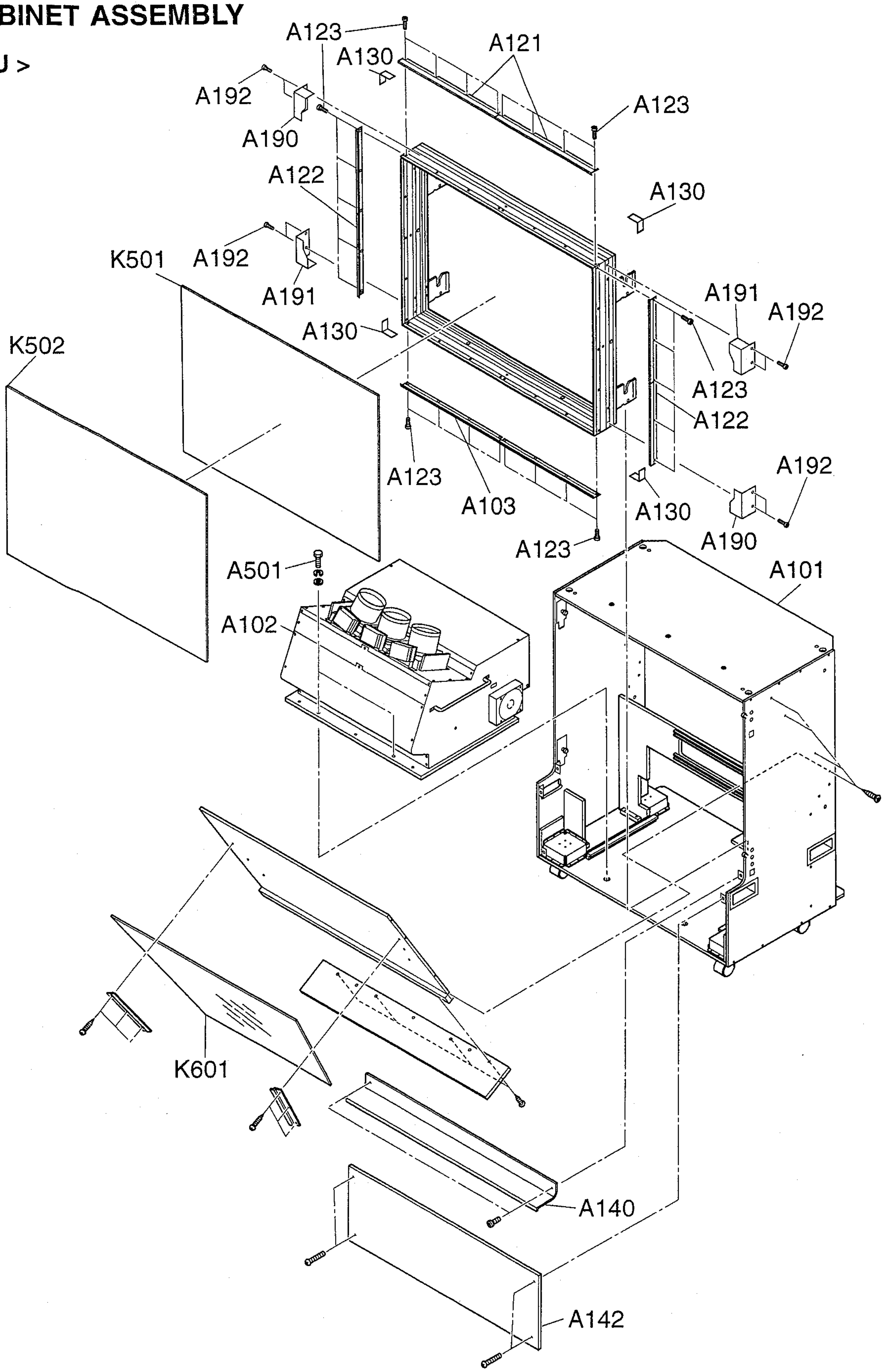

A703
Y101
Y103
Y120
Y200
P801
A701

< P5032U >

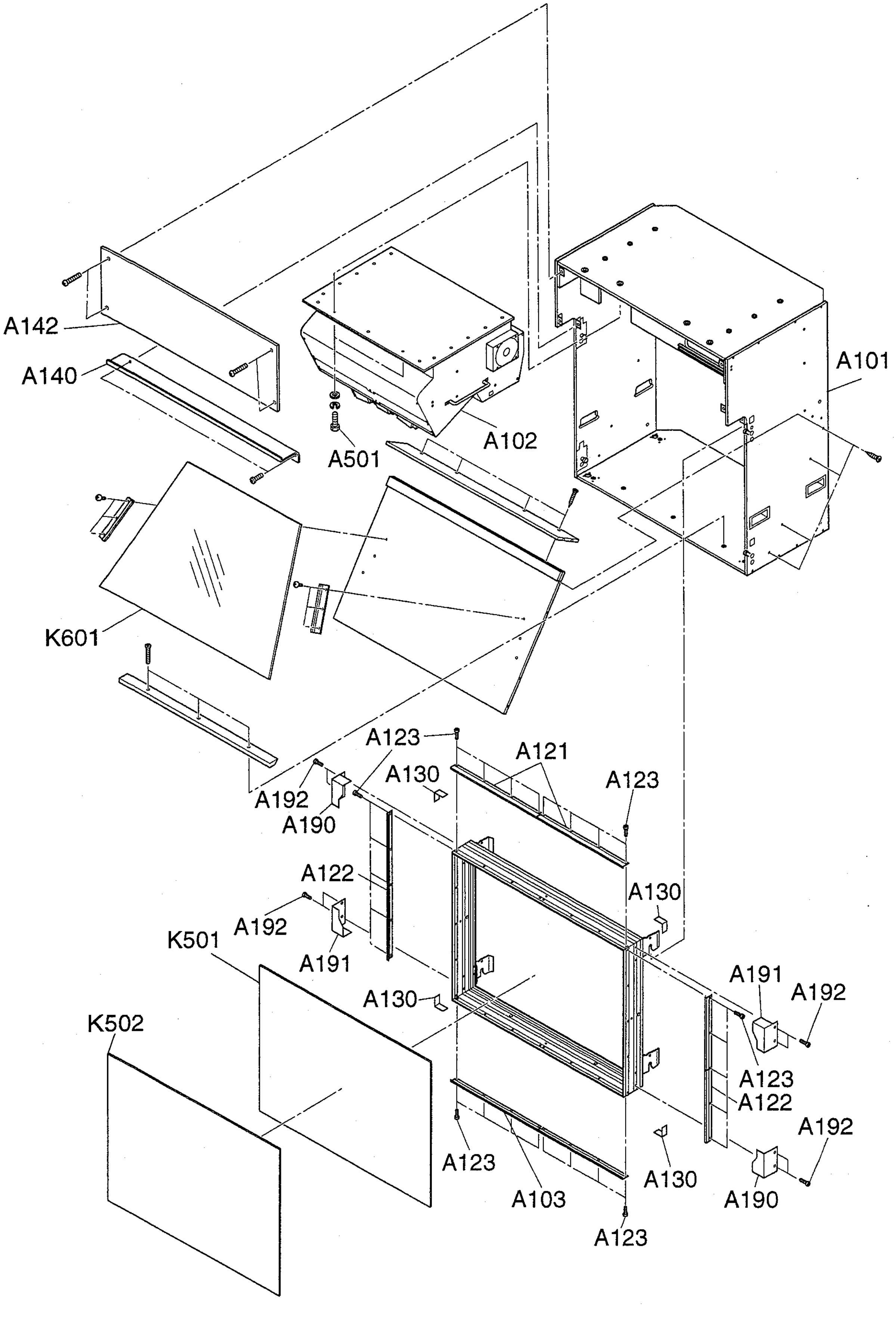

A703
Y101
Y103
Y120
Y200
P801
A701

5. CABINET ASSEMBLY

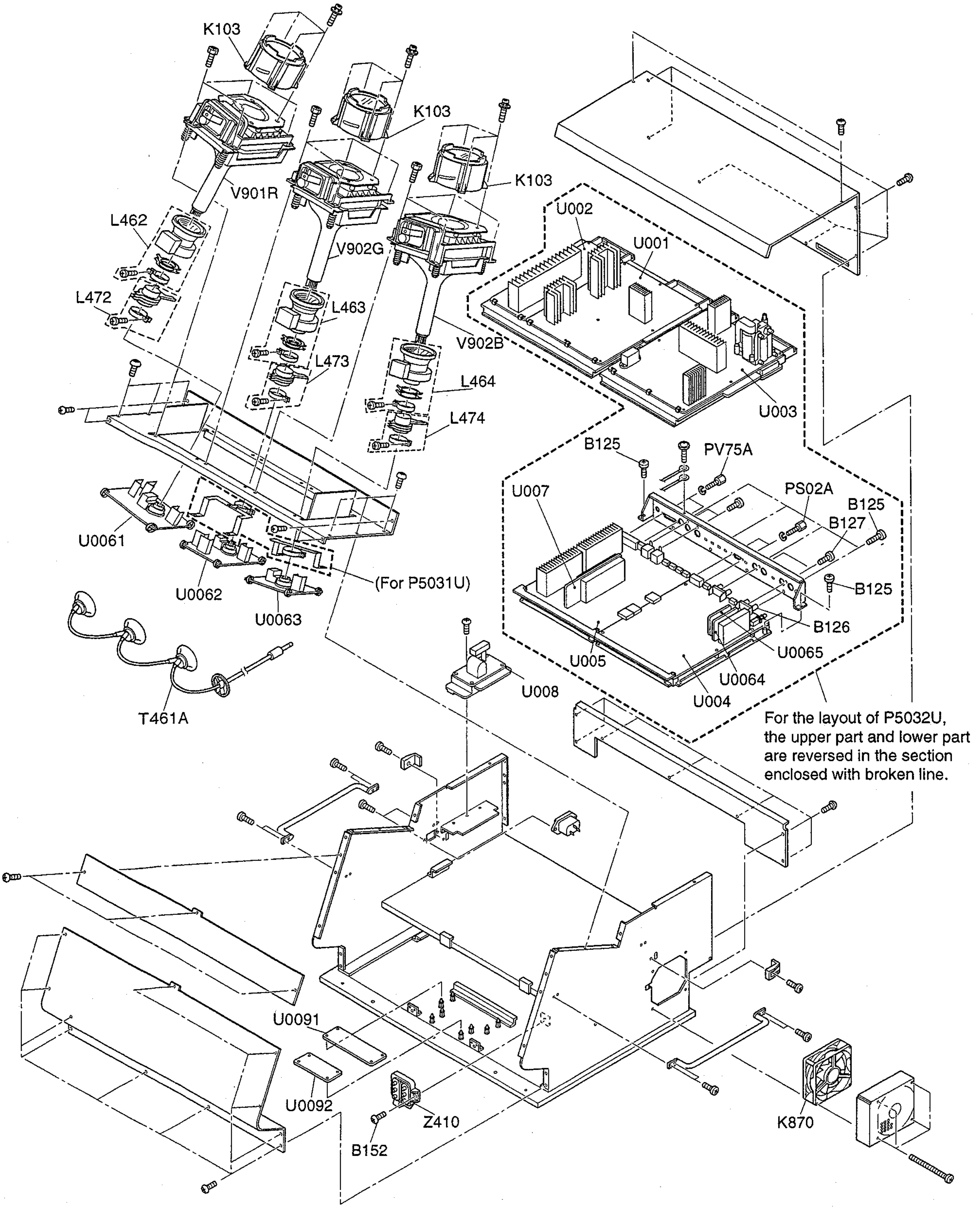
< 5031U >


A123
A130
A121
A192
A123
A190
A122
A130
K501
A192
A191
A191
A192
K502
A130
A123
A122
A123
A103
A130
A192
A123
A190
A501
A101
A102
K601
A140
A142

< P5032U >


A142
A140
A501
A102
A101
K601
A123
A121
A192
A130
A123
A190
A122
A130
A192
K501
A191
A130
A191
A192
K502
A123
A122
A123
A103
A130
A192
A190
A123

6. INNER UNIT


K103
K103
K103
V901R
L462
V902G
L472
L463
U002
U001
L473
V902B
L464
U003
L474
B125
PV75A
U007
PS02A
B125
B127
U0061
B125
(For P5031U)
U0062
B126
U0063
U0065
U005
U0064
U008
U004
T461A
U0091
U0092
Z410
B152
K870

For the layout of P5032U, the upper part and lower part are reversed in the section enclosed with broken line.

4. PARTS LIST

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
		- ELECTRICAL PARTS -		
■U001	23705140	PC Board Assy	Power	
		- INTEGRATED CIRCUITS -		
⚠Q801	23904247	IC	STR-S6708	
⚠Q802	23904247	IC	STR-S6708	
⚠Q809	A6907752	IC	S1854	
⚠Q811	23905815	IC	UPC2412AHF	
⚠Q812	B0372900	IC	TA78009AP	
QE01	B0347450	IC	TA7555P	
		- TRANSISTORS -		
Q803	23314141	Transistor	2SC3852	
⚠Q804	A8643112	Transistor	TLP621	
⚠Q805	A8643112	Transistor	TLP621	
Q807	A6317440	Transistor	2SC1815-Y	
Q810	A6532853	Transistor	2SA949-Y	
Q813	A6317440	Transistor	2SC1815-Y	
Q814	A6317440	Transistor	2SC1815-Y	
Q820	23314141	Transistor	2SC3852	
⚠Q821	A8643112	Transistor	TLP621	
Q822	A6317440	Transistor	2SC1815-Y	
Q824	A6333346	Transistor	2SC2655-Y	
Q825	A6317440	Transistor	2SC1815-Y	
Q843	A6317440	Transistor	2SC1815-Y	
Q844	A6317440	Transistor	2SC1815-Y	
Q845	A6317440	Transistor	2SC1815-Y	
Q846	A6317440	Transistor	2SC1815-Y	
QE02	A6317440	Transistor	2SC1815-Y	
QE03	A6534053	Transistor	2SA1015-Y	
QE04	A6734590	Transistor	2SC752(G)	
QE06	A6061550	Transistor	2SK530	
QE07	A6356460	Transistor	2SC3112-B	
		- DIODES -		
D820	23118094	Diode	EU2A	
D821	23118094	Diode	EU2A	
D822	23316309	Diode, Zener	UZ5. 6BSB	
D823	23316339	Diode, Zener	UZ15BSB	
D824	23316315	Diode, Zener	UZ6. 8BSB	
D825	23118094	Diode	EU2A	
D826	A7150351	Diode	1SS178(FA)	
D827	23118094	Diode	EU2A	
D828	A7150258	Diode	1SS176FA	
⚠D829	23316406	Diode	FML-G16S	
D830	23316292	Diode, Zener	UZ3. 3BSA	
⚠D831	23316184	Diode	FML-G12S	
D832	23316351	Diode, Zener	UZ22BSB	
D833	A7150351	Diode	1SS178(FA)	
D834	A7150258	Diode	1SS176FA	
⚠D835	23316306	Diode, Zener	UZ5. 1BSB	
D836	23316370	Diode, Zener	UZ36BSA	
D837	23118339	Diode, Zener	R2M	
D838	23316370	Diode, Zener	UZ36BSA	
D839	A7150258	Diode	1SS176FA	
D840	A7150258	Diode	1SS176FA	
D841	23316317	Diode, Zener	UZ7. 5BSA	
D842	23316327	Diode, Zener	UZ10BSB	
D843	A7150258	Diode	1SS176FA	
D844	23316302	Diode, Zener	UZ4. 7BSB	
D845	A7150258	Diode	1SS176FA	
D850	23118094	Diode	EU2A	
D851	23118094	Diode	EU2A	
D852	23316309	Diode, Zener	UZ5. 6BSB	
D853	23316339	Diode, Zener	UZ15BSB	
D854	23316315	Diode, Zener	UZ6. 8BSB	
D855	23118094	Diode	EU2A	
D856	A7150351	Diode	1SS178(FA)	
D857	23118094	Diode	EU2A	
D858	A7150258	Diode	1SS176FA	
⚠D859	23316406	Diode	FML-G16S	
⚠D860	23316406	Diode	FML-G16S	
⚠D861	23316406	Diode	FML-G16S	
⚠D862	23316406	Diode	FML-G16S	
D863	23316321	Diode, Zener	UZ8. 2BSB	
D864	23316374	Diode, Zener	UZ39BSA	
D865	A7150258	Diode	1SS176FA	
D866	23316312	Diode, Zener	UZ6. 2BSB	
D869	A8605702	Diode, LED	TLG114A	
D870	A8605702	Diode, LED	TLG114A	
D871	A8605702	Diode, LED	TLG114A	
D872	A8605702	Diode, LED	TLG114A	
D873	A8605702	Diode, LED	TLG114A	
D874	A8605702	Diode, LED	TLG114A	
D875	A8605702	Diode, LED	TLG114A	
D876	A8605702	Diode, LED	TLG114A	
D877	A7801205	Diode	SF0R3G42	
D878	A7801205	Diode	SF0R3G42	
D879	A7801205	Diode	SF0R3G42	
D880	A7801205	Diode	SF0R3G42	
D881	A7801205	Diode	SF0R3G42	
D882	A7801205	Diode	SF0R3G42	
D883	A7801205	Diode	SF0R3G42	
D884	A7801205	Diode	SF0R3G42	
D885	A7150258	Diode	1SS176FA	
D886	A7150258	Diode	1SS176FA	
D887	A7150258	Diode	1SS176FA	
D888	A7150258	Diode	1SS176FA	
D889	A7150258	Diode	1SS176FA	
D890	A7150258	Diode	1SS176FA	
D891	A7150258	Diode	1SS176FA	
D892	A7150258	Diode	1SS176FA	
D893	23316381	Diode	RU1P	
D894	A7150258	Diode	1SS176FA	
D895	23316381	Diode	RU1P	
DE02	23115774	Diode, Zener	RD6. 2E	
DE03	A7150258	Diode	1SS176FA	
DE04	23118499	Diode, Zener	RD18ESA	
DE05	23316400	Diode	RG2A	
DE06	23118096	Diode	RK34	
DE09	A7150258	Diode	1SS176FA	
DE10	A7150258	Diode	1SS176FA	
		- COILS -		
L404	23103880	Coil, Choke	TEM2011Y	
L405	23103880	Coil, Choke	TEM2011Y	
L407	23103880	Coil, Choke	TEM2011Y	
L801	23103880	Coil, Choke	TEM2011Y	
L802	23103880	Coil, Choke	TEM2011Y	
L803	23103880	Coil, Choke	TEM2011Y	
L804	23103880	Coil, Choke	TEM2011Y	
L805	23103880	Coil, Choke	TEM2011Y	
L806	23103880	Coil, Choke	TEM2011Y	
L807	23103880	Coil, Choke	TEM2011Y	
L808	23221970	Coil, Choke	TLN3009	
L809	23221746	Coil, Choke	TLN3155D	
L810	23221746	Coil, Choke	TLN3155D	
L811	23221746	Coil, Choke	TLN3155D	
L812	23103880	Coil, Choke	TEM2011Y	
L821	23103880	Coil, Choke	TEM2011Y	
L822	23103880	Coil, Choke	TEM2011Y	
L823	23103880	Coil, Choke	TEM2011Y	
L824	23103880	Coil, Choke	TEM2011Y	
L825	23103880	Coil, Choke	TEM2011Y	
L826	23103880	Coil, Choke	TEM2011Y	
L827	23103880	Coil, Choke	TEM2011Y	
L828	23103880	Coil, Choke	TEM2011Y	
L829	23103880	Coil, Choke	TEM2011Y	
L830	23103880	Coil, Choke	TEM2011Y	
L831	23103880	Coil, Choke	TEM2011Y	
L832	23103880	Coil, Choke	TEM2011Y	
L833	23221746	Coil, Choke	TLN3155D	
L834	23221961	Coil, Choke	TLN3017	
L835	23221970	Coil, Choke	TLN3009	
L836	23221746	Coil, Choke	TLN3155D	
		- CAPACITORS -		
C802	24095820	Cap, Plastic	0. 01μF	M 630V
C822	24667101	Cap, Electrolytic	100μF	M 25V
C823	24669331	Cap, Electrolytic	330μF	M 50V
C824	24214471	Cap, Ceramic	470pF	K 500V
C825	24214471	Cap, Ceramic	470pF	K 500V

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
C826	24676220	Cap, Electrolytic	22μF	M 100V
C827	24590152	Cap, Plastic	1500pF	J 50V
C828	24797470	Cap, Electrolytic	47μF	M 50V
C829	24092337	Cap, Ceramic	220pF	K 2kV
C830	24092341	Cap, Ceramic	470pF	K 2kV
C831	24214331	Cap, Ceramic	330pF	K 500V
C832	24092338	Cap, Ceramic	270pF	K 2kV
C833	24092341	Cap, Ceramic	470pF	K 2kV
C834	24086859	Cap, Electrolytic	470μF	M 200V
C835	24214331	Cap, Ceramic	330pF	K 500V
C836	24617044	Cap, Electrolytic	2200μF	M 35V
C837	24095680	Cap, Plastic	0.1μF	J 200V
C838	24677101	Cap, Electrolytic	100μF	M 160V
C839	24667101	Cap, Electrolytic	100μF	M 25V
C840	24666101	Cap, Electrolytic	100μF	M 16V
C841	24669470	Cap, Electrolytic	47μF	M 50V
C842	24538474	Cap, Plastic	0.47μF	J 50V
C843	24667101	Cap, Electrolytic	100μF	M 25V
C844	24666101	Cap, Electrolytic	100μF	M 16V
C845	24669471	Cap, Electrolytic	470μF	M 50V
C846	24666471	Cap, Electrolytic	470μF	M 16V
C847	24095820	Cap, Plastic	0.01μF	M 630V
C852	24667101	Cap, Electrolytic	100μF	M 25V
C853	24669331	Cap, Electrolytic	330μF	M 50V
C854	24214471	Cap, Ceramic	470pF	K 500V
C855	24214471	Cap, Ceramic	470pF	K 500V
C856	24676220	Cap, Electrolytic	22μF	M 100V
C857	24590272	Cap, Plastic	2700pF	J 50V
C858	24214331	Cap, Ceramic	330pF	K 500V
C859	24214331	Cap, Ceramic	330pF	K 500V
C860	24214331	Cap, Ceramic	330pF	K 500V
C861	24214331	Cap, Ceramic	330pF	K 500V
C862	24092344	Cap, Ceramic	820pF	K 2kV
C863	24092344	Cap, Ceramic	820pF	K 2kV
C864	24092344	Cap, Ceramic	820pF	K 2kV
C865	24092344	Cap, Ceramic	820pF	K 2kV
C866	24669222	Cap, Electrolytic	2200μF	M 50V
C867	24617044	Cap, Electrolytic	2200μF	M 35V
C868	24669222	Cap, Electrolytic	2200μF	M 50V
C869	24669222	Cap, Electrolytic	2200μF	M 50V
C870	24669339	Cap, Electrolytic	3.3μF	M 50V
C871	24591104	Cap, Plastic	0.1μF	J 50V
C872	24591104	Cap, Plastic	0.1μF	J 50V
C873	24591104	Cap, Plastic	0.1μF	J 50V
C874	24591104	Cap, Plastic	0.1μF	J 50V
C875	24591224	Cap, Plastic	0.22μF	J 50V
C876	24591104	Cap, Plastic	0.1μF	J 50V
C877	24591104	Cap, Plastic	0.1μF	J 50V
C878	24591104	Cap, Plastic	0.1μF	J 50V
⚠C879	24094837	Cap, Ceramic	3300pF	M AC400
⚠C880	24094837	Cap, Ceramic	3300pF	M AC400
⚠C881	24094820	Cap, Ceramic	2200pF	M AC400
⚠C882	24094820	Cap, Ceramic	2200pF	M AC400
⚠C883	24095820	Cap, Plastic	0.01μF	M 630V
⚠C884	24092345	Cap, Ceramic	1000pF	K 2kV
⚠C885	24095779	Cap, Plastic	0.62μF	J 400V
⚠C886	24092345	Cap, Ceramic	1000pF	K 2kV
⚠C888	24677339	Cap, Electrolytic	3.3μF	M 160V
⚠C889	24666331	Cap, Electrolytic	330μF	M 16V
CE01	24666470	Cap, Electrolytic	47μF	M 16V
CE02	24232103	Cap, Ceramic	0.01μF	Z 50V
CE03	24598331	Cap, Plastic	330pF	J 50V
CE04	24666100	Cap, Electrolytic	10μF	M 16V
CE05	24679330	Cap, Electrolytic	33μF	M 250V
CE06	24666222	Cap, Electrolytic	2200μF	M 16V
CE07	24677470	Cap, Electrolytic	47μF	M 160V
CE08	24591473	Cap, Plastic	0.047μF	J 50V
CE71	24591103	Cap, Plastic	0.01μF	J 50V
		- RESISTORS -		
⚠R469	24000921	Res, Fusible	1.2Ω	J 2W
R830	24322278	Res, Metal	0.27Ω	J 1W
R831	24383100	Res, Oxide Metal	10Ω	J 2W
R832	24366101	Res, Carbon	100Ω	J 1/6W
R833	24384104	Res, Oxide Metal	100kΩ	J 3W
R834	24552511	Res, Oxide Metal	510Ω	J 1/2W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
R835	24552103	Res, Oxide Metal	10kΩ	J 1/2W
R836	24366222	Res, Carbon	2.2kΩ	J 1/6W
R837	24366332	Res, Carbon	3.3kΩ	J 1/6W
R838	24321568	Res, Oxide Metal	0.56Ω	J 1/2W
R839	24554393	Res, Oxide Metal	3.9kΩ	J 2W
R840	24554393	Res, Oxide Metal	3.9kΩ	J 2W
R842	24381102	Res, Oxide Metal	1kΩ	J 1/2W
⚠R843	24553123	Res, Oxide Metal	12kΩ	J 1W
R844	24553103	Res, Oxide Metal	10kΩ	J 1W
R845	24366242	Res, Carbon	2.4kΩ	J 1/6W
⚠R846	24510569	Res, Cement	5.6Ω	J 5W
R847	24366202	Res, Carbon	2kΩ	J 1/6W
R848	24366202	Res, Carbon	2kΩ	J 1/6W
R849	24366104	Res, Carbon	100kΩ	J 1/6W
R850	24366203	Res, Carbon	20kΩ	J 1/6W
R851	24366273	Res, Carbon	27kΩ	J 1/6W
R852	24366102	Res, Carbon	1kΩ	J 1/6W
R853	24366821	Res, Carbon	820Ω	J 1/6W
R854	24366103	Res, Carbon	10kΩ	J 1/6W
R855	24554130	Res, Oxide Metal	13Ω	J 2W
R856	24366153	Res, Carbon	15kΩ	J 1/6W
R857	24366201	Res, Carbon	200Ω	J 1/6W
R860	24322688	Res, Metal	0.68Ω	J 1W
R861	24383100	Res, Oxide Metal	10Ω	J 2W
R862	24366101	Res, Carbon	100Ω	J 1/6W
R863	24384104	Res, Oxide Metal	100kΩ	J 3W
R864	24552511	Res, Oxide Metal	510Ω	J 1/2W
R865	24552103	Res, Oxide Metal	10kΩ	J 1/2W
R866	24366122	Res, Carbon	1.2kΩ	J 1/6W
R867	24321568	Res, Oxide Metal	0.56Ω	J 1/2W
R868	24366272	Res, Carbon	2.7kΩ	J 1/6W
R869	24366272	Res, Carbon	2.7kΩ	J 1/6W
R870	24552472	Res, Oxide Metal	4700Ω	J 1/2W
R871	24552472	Res, Oxide Metal	4700Ω	J 1/2W
R872	24552472	Res, Oxide Metal	4700Ω	J 1/2W
R873	24552472	Res, Oxide Metal	4700Ω	J 1/2W
R874	24552202	Res, Oxide Metal	2kΩ	J 1/2W
R875	24366432	Res, Carbon	4.3kΩ	J 1/6W
R876	24366392	Res, Carbon	3.9kΩ	J 1/6W
R877	24366243	Res, Carbon	24kΩ	J 1/6W
R880	24366681	Res, Carbon	680Ω	J 1/6W
R881	24366681	Res, Carbon	680Ω	J 1/6W
R882	24366681	Res, Carbon	680Ω	J 1/6W
R883	24366681	Res, Carbon	680Ω	J 1/6W
R884	24366681	Res, Carbon	680Ω	J 1/6W
R885	24366681	Res, Carbon	680Ω	J 1/6W
R886	24366681	Res, Carbon	680Ω	J 1/6W
R887	24366681	Res, Carbon	680Ω	J 1/6W
R888	24366102	Res, Carbon	1kΩ	J 1/6W
R889	24366102	Res, Carbon	1kΩ	J 1/6W
R890	24366102	Res, Carbon	1kΩ	J 1/6W
R891	24366102	Res, Carbon	1kΩ	J 1/6W
R892	24366102	Res, Carbon	1kΩ	J 1/6W
R893	24366102	Res, Carbon	1kΩ	J 1/6W
R894	24366102	Res, Carbon	1kΩ	J 1/6W
R895	24366102	Res, Carbon	1kΩ	J 1/6W
RD01	24366471	Res, Carbon	470Ω	J 1/6W
RD02	24366471	Res, Carbon	470Ω	J 1/6W
RD03	24366471	Res, Carbon	470Ω	J 1/6W
RD04	24366471	Res, Carbon	470Ω	J 1/6W
RD05	24366471	Res, Carbon	470Ω	J 1/6W
RD06	24366471	Res, Carbon	470Ω	J 1/6W
RD07	24366471	Res, Carbon	470Ω	J 1/6W
RD08	24366471	Res, Carbon	470Ω	J 1/6W
RD09	24366102	Res, Carbon	1kΩ	J 1/6W
RD10	24327203	Res, Metal	20kΩ	F 1/4W
RD11	24381131	Res, Metal	130Ω	J 1/2W
RD12	24381301	Res, Oxide Metal	300Ω	J 1/2W
⚠RD13	24323518	Res, Metal	0.51Ω	J 2W
RD14	24327912	Res, Metal	9.1kΩ	F 1/4W
RD15	24327123	Res, Metal	12kΩ	F 1/4W
RD16	24327133	Res, Metal	13kΩ	F 1/4W
⚠RD17	24382331	Res, Oxide Metal	330Ω	J 1W
⚠RD18	24382331	Res, Oxide Metal	330Ω	J 1W
RD19	24327203	Res, Metal	20kΩ	F 1/4W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
RD20	24383563	Res, Oxide Metal	56kΩ	J 2W
RD21	24366332	Res, Carbon	3. 3kΩ	J 1/6W
RD22	24383563	Res, Oxide Metal	56kΩ	J 2W
RD23	24366362	Res, Carbon	3. 6kΩ	J 1/6W
RD24	24366332	Res, Carbon	3. 3kΩ	J 1/6W
RD25	24366103	Res, Carbon	10kΩ	J 1/6W
RD26	24366332	Res, Carbon	3. 3kΩ	J 1/6W
RD27	24366392	Res, Carbon	3. 9kΩ	J 1/6W
RD28	24366391	Res, Carbon	390Ω	J 1/6W
RD29	24366221	Res, Carbon	220Ω	J 1/6W
RE01	24367912	Res, Carbon	9. 1kΩ	G 1/6W
RE02	24367223	Res, Carbon	22kΩ	G 1/6W
RE03	24366101	Res, Carbon	100Ω	J 1/6W
RE04	24366682	Res, Carbon	6. 8kΩ	J 1/6W
RE05	24366122	Res, Carbon	1. 2kΩ	J 1/6W
RE06	24366222	Res, Carbon	2. 2kΩ	J 1/6W
RE07	24327394	Res, Metal	390kΩ	F 1/4W
RE12	24366102	Res, Carbon	1kΩ	J 1/6W
RE13	24327394	Res, Metal	390kΩ	F 1/4W
RE14	24327622	Res, Metal	6. 2kΩ	F 1/4W
⚠RE78	24321479	Res, Metal	4. 7kΩ	J 1/2W
RE79	24383103	Res, Oxide Metal	10kΩ	J 2W
RE80	24366223	Res, Carbon	22kΩ	J 1/6W
		- MISCELLANEOUS -		
C834A	23960136	Bond		
D829B	70391355	Screw	3x8mm	
D831B	70391355	Screw	3x8mm	
D859B	70391355	Screw	3x8mm	
D860B	70391355	Screw	3x8mm	
D861B	70391355	Screw	3x8mm	
D862B	70391355	Screw	3x8mm	
⚠F802	23144893	Fuse	125V, 3. 15A	
F802A	23165433	Fuse Holder		
⚠F803	23144897	Fuse, 125V, 2. 0A		
F803A	23165433	Fuse Holder		
⚠F804	23144854	Fuse, 1. 6A, 125V		
F804A	23165433	Fuse Holder		
⚠F805	23144888	Fuse	125V, 5. 0A	
F805A	23165433	Fuse Holder		
Q801B	72471082	Screw, 3x10mm		
Q802B	72471082	Screw, 3x10mm		
Q811B	70391355	Screw	3x8mm	
Q812B	70391355	Screw	3x8mm	
⚠T403	23217281	Transformer	TPW3326AD	
⚠T804	23217279	Transformer	TPW3324AE	
⚠T805	23217280	Transformer	TPW3325AE	
■U002	23704522	PC Board Assy	Sub Power	
		- INTEGRATED CIRCUITS -		
Q842	23905006	IC	FA5331P	
Q860	23904846	IC	MCT7815BT	
Q861	23904846	IC	MCT7815BT	
		- TRANSISTORS -		
⚠Q841	A6064350	Transistor	2SK894	
Q862	A6333346	Transistor	2SC2655-Y	
Q863	A6333346	Transistor	2SC2655-Y	
Q864	A6333346	Transistor	2SC2655-Y	
Q865	A6333346	Transistor	2SC2655-Y	
Q866	A6534145	Transistor	2SA1020-Y	
Q867	A6534145	Transistor	2SA1020-Y	
Q868	A6534145	Transistor	2SA1020-Y	
Q869	A6534145	Transistor	2SA1020-Y	
⚠Q870	A6064350	Transistor	2SK894	
⚠Q871	A6064350	Transistor	2SK894	
⚠Q872	A6064350	Transistor	2SK894	
		- DIODES -		
⚠D801	23316693	Diode	RBV-606	
D802	A7568752	Diode	1S1887A	
⚠D803	23316412	Diode	FMG-G36S	
D804	23316269	Diode	AK04	
D805	A7150258	Diode	1SS176FA	
D806	23316304	Diode, Zener	UZ4. 7BSC	
D807	23118060	Diode	AL01Z	
D808	23118060	Diode	AL01Z	
D809	23118060	Diode	AL01Z	

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
D810	23118060	Diode	AL01Z	
DD01	23118060	Diode	AL01Z	
DD02	23118060	Diode	AL01Z	
DD03	23118060	Diode	AL01Z	
DD04	23118060	Diode	AL01Z	
DD05	A7150258	Diode	1SS176FA	
DD06	A7150258	Diode	1SS176FA	
DD07	A7150258	Diode	1SS176FA	
DD08	A7150258	Diode	1SS176FA	
DD09	23316381	Diode	RU1P	
DD10	23316354	Diode, Zener	UZ24BSA	
		- COILS -		
L850	23103792	Filter	TEM2025Y	
L851	23103880	Coil, Choke	TEM2011Y	
L852	23103792	Filter	TEM2025Y	
L853	23103880	Coil, Choke	TEM2011Y	
L854	23103792	Filter	TEM2025Y	
L855	23103880	Coil, Choke	TEM2011Y	
L856	23103792	Filter	TEM2025Y	
L857	23103880	Coil, Choke	TEM2011Y	
L858	23103880	Coil, Choke	TEM2011Y	
L859	23103880	Coil, Choke	TEM2011Y	
L860	23103880	Coil, Choke	TEM2011Y	
L861	23103880	Coil, Choke	TEM2011Y	
		- CAPACITORS -		
⚠C801	24082318	Cap, Plastic	0. 1μF	M 250V
C803	24676101	Cap, Electrolytic	100μF	M 100V
C804	24591104	Cap, Plastic	0. 1μF	J 50V
C805	24668100	Cap, Electrolytic	10μF	M 35V
⚠C806	24086043	Cap, Electrolytic	820μF	M 450V
C807	24591473	Cap, Plastic	0. 047μF	J 50V
C808	24436331	Cap, Ceramic	330pF	J 50V
C809	24539104	Cap, Plastic	0. 1μF	J 50V
C810	24436181	Cap, Ceramic	180pF	J 50V
C811	24591182	Cap, Plastic	1800pF	J 50V
C812	24591154	Cap, Plastic	0. 15μF	J 50V
C813	24669331	Cap, Electrolytic	330μF	M 50V
⚠C887	24094820	Cap, Ceramic	2200pF	M AC400
⚠CD01	24094820	Cap, Ceramic	2200pF	M AC400
CD03	24590471	Cap, Plastic	470pF	J 50V
CD04	24669471	Cap, Electrolytic	470μF	M 50V
CD05	24591104	Cap, Plastic	0. 1μF	J 50V
CD06	24668100	Cap, Electrolytic	10μF	M 35V
CD07	24668100	Cap, Electrolytic	10μF	M 35V
CD08	24668100	Cap, Electrolytic	10μF	M 35V
CD09	24668100	Cap, Electrolytic	10μF	M 35V
CD10	24092344	Cap, Ceramic	820pF	K 2kV
CD11	24095820	Cap, Plastic	0. 01μF	M 630V
CD12	24095782	Cap, Plastic	0. 47μF	J 400V
CD13	24092335	Cap, Ceramic	150pF	K 2kV
CD18	24092281	Cap, Ceramic	4700pF	M 250V
CD19	24092281	Cap, Ceramic	4700pF	M 250V
CD20	24092281	Cap, Ceramic	4700pF	M 250V
CD21	24092281	Cap, Ceramic	4700pF	M 250V
CD22	24094820	Cap, Ceramic	2200pF	M AC400
CD23	24082318	Cap, Plastic	0. 1μF	M 250V
		- RESISTORS -		
R803	24367244	Res, Carbon	240kΩ	G 1/6W
R804	24367244	Res, Carbon	240kΩ	G 1/6W
R805	24367242	Res, Carbon	2. 4kΩ	G 1/6W
R806	24554123	Res, Oxide Metal	12kΩ	J 2W
R807	24554123	Res, Oxide Metal	12kΩ	J 2W
R808	24366100	Res, Carbon	10Ω	J 1/6W
R810	24367101	Res, Carbon	100Ω	G 1/2W
R811	24366103	Res, Carbon	10kΩ	J 1/6W
R812	24366473	Res, Carbon	47kΩ	J 1/6W
R813	24366684	Res, Carbon	680kΩ	J 1/6W
R814	24366333	Res, Carbon	33kΩ	J 1/6W
R815	24366153	Res, Carbon	15kΩ	J 1/6W
R816	24366820	Res, Carbon	82Ω	J 1/6W
R817	24367184	Res, Carbon	180kΩ	G 1/6W
R818	24367184	Res, Carbon	180kΩ	G 1/6W
R819	24366202	Res, Carbon	2kΩ	J 1/6W
R820	24066879	Res, Variable	1kΩ	B 0. 3W
⚠R821	24327274	Res, Metal	270kΩ	F 1/4W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
⚠R822	24327274	Res, Metal	270kΩ	F 1/4W
⚠R823	24327202	Res, Metal	2kΩ	F 1/4W
R824	24367184	Res, Carbon	180kΩ	G 1/6W
⚠R858	24330478	Res, Metal	0.47Ω	J 3W
⚠R859	24330478	Res, Metal	0.47Ω	J 3W
RD31	24366331	Res, Carbon	330Ω	J 1/6W
RD32	24366331	Res, Carbon	330Ω	J 1/6W
RD33	24366331	Res, Carbon	330Ω	J 1/6W
RD34	24366331	Res, Carbon	330Ω	J 1/6W
RD35	24322208	Res, Metal	0.2Ω	J 1W
RD36	24322208	Res, Metal	0.2Ω	J 1W
RD37	24322208	Res, Metal	0.2Ω	J 1W
RD38	24322208	Res, Metal	0.2Ω	J 1W
RD39	24382102	Res, Oxide Metal	1kΩ	J 1W
RD40	24382102	Res, Oxide Metal	1kΩ	J 1W
RD41	24382102	Res, Oxide Metal	1kΩ	J 1W
RD42	24382102	Res, Oxide Metal	1kΩ	J 1W
⚠RD43	24327121	Res, Metal	120Ω	F 1/4W
RD44	24367124	Res, Carbon	120kΩ	G 1/6W
⚠RD45	24330478	Res, Metal	0.47Ω	J 3W
RD46	24554162	Res, Oxide Metal	1.6kΩ	J 2W
⚠RD48	24531120	Res, Fusible	12Ω	J 1/2W
RD49	24554123	Res, Oxide Metal	12kΩ	J 2W
		- MISCELLANEOUS -		
D803B	70391356	Screw	3x10mm	
P882	23368020	Plug	2P	
Q841B	23712312	Screw	3x0.5x12mm	
Q841E	A8012290	Insulator	AC229	
Q841F	A8013110	Washer		
Q841H	23056300	Screw		
Q841I	23742030	Nut	3mm	
Q841J	23037312	Screw	3x12mm	
Q870B	23712312	Screw	3x0.5x12mm	
Q870E	A8012290	Insulator	AC229	
Q870F	A8013110	Washer		
Q870H	23056300	Screw		
Q870I	23742030	Nut	3mm	
Q871B	23712312	Screw	3x0.5x12mm	
Q871E	A8012290	Insulator	AC229	
Q871F	A8013110	Washer		
Q871H	23056300	Screw		
Q871I	23742030	Nut	3mm	
Q872B	23712312	Screw	3x0.5x12mm	
Q872E	A8012290	Insulator	AC229	
Q872F	A8013110	Washer		
Q872H	23056300	Screw		
Q872I	23742030	Nut	3mm	
⚠T801	23211002	Line Filter	TRF3173	
⚠T802	23211002	Line Filter	TRF3173	
⚠T803	23248118	Coil, Choke	TLN3397	
■U003	23704004	PC Board Assy	Deflection	
		- INTEGRATED CIRCUITS -		
Q304	B0384683	IC	TA8859AP	
Q305	B0475382	IC	TC4538BP	
Q313	B0347450	IC	TA7555P	
Q440	B0350000	IC	TA75458P	
Q470	B0350510	IC	TA75558S	
QE47	B0347530	IC	TA75358CP	
QE50	B0373230	IC	TA78012AP	
		- TRANSISTORS -		
Q301	A6324961	Transistor	2SC2229-Y	
⚠Q302	A6365320	Transistor	2SC3907-O	
⚠Q303	A6549470	Transistor	2SA1516-O	
Q306	A6317440	Transistor	2SC1815-Y	
Q307	A6002020	Transistor	RN1202	
Q308	A6317440	Transistor	2SC1815-Y	
Q309	A6002040	Transistor	RN1204	
Q310	A6012020	Transistor	RN2202	
Q311	A6547250	Transistor	2SA1320	
Q312	A6317440	Transistor	2SC1815-Y	
Q314	A6734590	Transistor	2SC752(G)	
Q315	A6734590	Transistor	2SC752(G)	
Q320	A6000020	Transistor	RN1002	
Q401	A678971C	Transistor	2SC1569X	

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
⚠Q404	A6365284	Transistor	2SC3893A	
Q410	A6734590	Transistor	2SC752(G)	
Q411	A6734590	Transistor	2SC752(G)	
Q412	A6317440	Transistor	2SC1815-Y	
Q413	A6734590	Transistor	2SC752(G)	
Q414	A6317440	Transistor	2SC1815-Y	
Q415	A6317440	Transistor	2SC1815-Y	
Q420	A6002030	Transistor	RN1203	
Q421	A6317440	Transistor	2SC1815-Y	
Q422	A6002030	Transistor	RN1203	
Q429	A678971C	Transistor	2SC1569X	
Q430	A6317440	Transistor	2SC1815-Y	
Q431	A6317440	Transistor	2SC1815-Y	
⚠Q433	A6365284	Transistor	2SC3893A	
Q441	A6333346	Transistor	2SC2655-Y	
⚠Q451	A6534053	Transistor	2SA1015-Y	
⚠Q452	A6317440	Transistor	2SC1815-Y	
Q471	A6357850	Transistor	2SC3148	
QE10	A6002020	Transistor	RN1202	
QE11	A6317440	Transistor	2SC1815-Y	
QE44	A6852700	Transistor	2SD1090	
QE45	A6325040	Transistor	2SC2230-Y	
		- DIODES -		
D301	A7150258	Diode	1SS176FA	
D302	A7150258	Diode	1SS176FA	
D303	A7150258	Diode	1SS176FA	
D304	23316291	Diode, Zener	UZ3.0BSB	
D305	A7150258	Diode	1SS176FA	
D306	23316282	Diode, Zener	UZ2.0BSA	
D399	A7150258	Diode	1SS176FA	
D410	A7150258	Diode	1SS176FA	
D411	A7150258	Diode	1SS176FA	
D412	23316302	Diode, Zener	UZ4.7BSB	
D413	A7150258	Diode	1SS176FA	
D414	A7150258	Diode	1SS176FA	
D415	A7150258	Diode	1SS176FA	
D416	A7150258	Diode	1SS176FA	
D417	A7150258	Diode	1SS176FA	
D424	23115878	Diode, Zener	UPC574J	
D437	23316321	Diode, Zener	UZ8.2BSB	
D471	A7568460	Diode	TVR-1B	
⚠D473	A7150258	Diode	1SS176FA	
⚠D475	23115774	Diode, Zener	RD6.2E	
D476	A7150258	Diode	1SS176FA	
DE11	23316333	Diode, Zener	UZ12BSB	
DE12	A7150258	Diode	1SS176FA	
DE14	23115774	Diode, Zener	RD6.2E	
DE15	A7150258	Diode	1SS176FA	
DE16	A7568719	Diode	1S1887	
DE17	A7150258	Diode	1SS176FA	
DE18	A7150258	Diode	1SS176FA	
		- COILS -		
L403	23221961	Coil, Choke	TLN3017	
L408	23103880	Coil, Choke	TEM2011Y	
L409	23103880	Coil, Choke	TEM2011Y	
L422	23103859	Coil, Choke	TEM2011	
L425	23221050	Coil, Choke	TLN1015	
L431	23103859	Coil, Choke	TEM2011	
L441	23233004	Coil, Linearity	TLN2083	
L442	23222691	Coil, Width	TLN2031	
L470	23233064	Coil, Width	TLN2110	
		- CAPACITORS -		
C301	24666101	Cap, Electrolytic	100μF	M 16V
C302	24669229	Cap, Electrolytic	2.2μF	M 50V
C303	24591223	Cap, Plastic	0.022μF	J 50V
C304	24591474	Cap, Plastic	0.47μ	J 50V
C305	24666102	Cap, Electrolytic	1000μF	M 16V
C306	24591102	Cap, Plastic	1000pF	J 50V
C307	24669010	Cap, Electrolytic	1μF	M 50V
C308	24085946	Cap, Electrolytic	10μF	M 16V
C309	24591103	Cap, Plastic	0.01μF	J 50V
C315	24677100	Cap, Electrolytic	10μF	M 160V
C325	24591332	Cap, Plastic	3300pF	J 50V
C326	24591102	Cap, Plastic	1000pF	J 50V
C327	24591153	Cap, Plastic	0.015μF	J 50V

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
C330	24214151	Cap, Ceramic	150pF	K 500V
C331	24676100	Cap, Electrolytic	10µF	M 100V
C332	24677221	Cap, Electrolytic	220µF	M 160V
C333	24214332	Cap, Ceramic	3300pF	K 500V
C334	24617912	Cap, Electrolytic	2.2µF	K 50V
C340	24666470	Cap, Electrolytic	47µF	M 16V
C341	24666220	Cap, Electrolytic	22µF	M 16V
C342	24591472	Cap, Plastic	4700pF	J 50V
C343	24828153	Cap, Plastic	0.015µF	J 200V
C410	24214472	Cap, Ceramic	4700pF	K 500V
C411	24591103	Cap, Plastic	0.01µF	J 50V
C412	24666220	Cap, Electrolytic	22µF	M 16V
C413	24591333	Cap, Plastic	0.033µF	J 50V
C414	24666222	Cap, Electrolytic	2200µF	M 16V
C415	24669220	Cap, Electrolytic	22µF	M 50V
C417	24539225	Cap, Plastic	2.2µ	J 50V
C418	24666100	Cap, Electrolytic	10µF	M 16V
C422	24212102	Cap, Ceramic	1000pF	K 50V
C424	24591334	Cap, Plastic	0.33µF	J 50V
C425	24591104	Cap, Plastic	0.1µF	J 50V
C429	24666220	Cap, Electrolytic	22µF	M 16V
⚠C431	24095778	Cap, Plastic	0.62µ	J 400V
⚠C432	24095774	Cap, Plastic	3300pF	1400V
⚠C433	24095774	Cap, Plastic	3300pF	1400V
C436	24828563	Cap, Plastic	0.056µF	J 200V
⚠C440	24095893	Cap, Plastic	6200pF	1250V
⚠C441	24095893	Cap, Plastic	6200pF	1250V
⚠C443	24095629	Cap, Plastic	0.62µF	J 200V
⚠C444	24095753	Cap, Plastic	0.39µF	J 200V
C447	24086917	Cap, Electrolytic	470µF	M 160V
C450	24214472	Cap, Ceramic	4700pF	K 500V
C451	24766479	Cap, Electrolytic	4.7µF	M 50V
C452	24666100	Cap, Electrolytic	10µF	M 16V
C453	24212102	Cap, Ceramic	1000pF	K 50V
C457	24666100	Cap, Electrolytic	10µF	M 16V
C460	24640908	Cap, Electrolytic	33µF	M 160V
C462	24212152	Cap, Ceramic	1500pF	K 50V
C463	24214332	Cap, Ceramic	3300pF	K 500V
C464	24214391	Cap, Ceramic	390pF	K 500V
C465	24677100	Cap, Electrolytic	10µF	M 160V
C466	24214391	Cap, Ceramic	390pF	K 500V
C467	24214332	Cap, Ceramic	3300pF	K 500V
C468	24212152	Cap, Ceramic	1500pF	K 50V
C469	24677100	Cap, Electrolytic	10µF	M 160V
C476	24092338	Cap, Ceramic	270pF	K 2kV
C477	24092341	Cap, Ceramic	470pF	K 2kV
CE10	24667220	Cap, Electrolytic	22µF	M 25V
CE11	24667101	Cap, Electrolytic	100µF	M 25V
CE12	24667101	Cap, Electrolytic	100µF	M 25V
CE52	24677101	Cap, Electrolytic	100µF	M 160V
CE57	24232103	Cap, Ceramic	0.01µF	Z 50V
CE58	24232103	Cap, Ceramic	0.01µF	Z 50V
CE60	24085946	Cap, Electrolytic	10µF	M 16V
CE61	24538104	Cap, Plastic	0.1µF	J 50V
CE62	24538334	Cap, Plastic	0.33µF	J 50V
CE63	24538104	Cap, Plastic	0.1µF	J 50V
CE64	24666470	Cap, Electrolytic	47µF	M 16V
CE70	24667101	Cap, Electrolytic	100µF	M 25V
		- RESISTORS -		
⚠R301	24322339	Res, Oxide Metal	3.3Ω	J 1W
R306	24366822	Res, Carbon	8.2kΩ	J 1/6W
R307	24366104	Res, Carbon	100kΩ	J 1/6W
⚠R309	24321229	Res, Oxide Metal	2.2Ω	J 1/2W
⚠R310	24321229	Res, Oxide Metal	2.2Ω	J 1/2W
R311	24552472	Res, Oxide Metal	4700Ω	J 1/2W
R312	24552562	Res, Oxide Metal	5.6kΩ	J 1/2W
R313	24552820	Res, Oxide Metal	82Ω	J 1/2W
R314	24366222	Res, Carbon	2.2kΩ	J 1/6W
⚠R315	24000439	Res, Fusible	1Ω	J 1/2W
R316	24366102	Res, Carbon	1kΩ	J 1/6W
R317	24366223	Res, Carbon	22kΩ	J 1/6W
R318	24366183	Res, Carbon	18kΩ	J 1/6W
R319	24366103	Res, Carbon	10kΩ	J 1/6W
R320	24366471	Res, Carbon	470Ω	J 1/6W
R321	24366471	Res, Carbon	470Ω	J 1/6W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
R322	24366472	Res, Carbon	4.7kΩ	J 1/6W
R323	24552331	Res, Oxide Metal	330Ω	J 1/2W
R324	24366223	Res, Carbon	22kΩ	J 1/6W
R325	24366101	Res, Carbon	100Ω	J 1/6W
R326	24366222	Res, Carbon	2.2kΩ	J 1/6W
R327	24366101	Res, Carbon	100Ω	J 1/6W
R331	24382102	Res, Oxide Metal	1kΩ	J 1W
R332	24382102	Res, Oxide Metal	1kΩ	J 1W
⚠R333	24382102	Res, Oxide Metal	1kΩ	J 1W
R340	24552100	Res, Oxide Metal	10Ω	J 1/2W
R341	24366222	Res, Carbon	2.2kΩ	J 1/6W
R360	24366104	Res, Carbon	100kΩ	J 1/6W
R361	24381683	Res, Oxide Metal	68kΩ	J 1/2W
R362	24382273	Res, Oxide Metal	27kΩ	J 1W
R363	24366332	Res, Carbon	3.3kΩ	J 1/6W
R364	24366222	Res, Carbon	2.2kΩ	J 1/6W
R365	24366101	Res, Carbon	100Ω	J 1/6W
R366	24366101	Res, Carbon	100Ω	J 1/6W
R367	24366332	Res, Carbon	3.3kΩ	J 1/6W
R368	24366332	Res, Carbon	3.3kΩ	J 1/6W
R369	24366223	Res, Carbon	22kΩ	J 1/6W
R370	24366564	Res, Carbon	560kΩ	J 1/6W
R371	24366102	Res, Carbon	1kΩ	J 1/6W
R372	24366223	Res, Carbon	22kΩ	J 1/6W
⚠R408	24383682	Res, Oxide Metal	6.8kΩ	J 2W
⚠R409	24383682	Res, Oxide Metal	6.8kΩ	J 2W
R410	24366223	Res, Carbon	22kΩ	J 1/6W
R411	24366223	Res, Carbon	22kΩ	J 1/6W
R412	24366472	Res, Carbon	4.7kΩ	J 1/6W
R413	24366103	Res, Carbon	10kΩ	J 1/6W
R414	24366222	Res, Carbon	2.2kΩ	J 1/6W
R415	24366103	Res, Carbon	10kΩ	J 1/6W
R416	24366472	Res, Carbon	4.7kΩ	J 1/6W
R417	24366222	Res, Carbon	2.2kΩ	J 1/6W
R418	24366101	Res, Carbon	100Ω	J 1/6W
R419	24366101	Res, Carbon	100Ω	J 1/6W
R420	24366332	Res, Carbon	3.3kΩ	J 1/6W
R422	24366470	Res, Carbon	47Ω	J 1/6W
R424	24366221	Res, Carbon	220Ω	J 1/6W
R426	24366391	Res, Carbon	390Ω	J 1/6W
R427	24366181	Res, Carbon	180Ω	J 1/6W
⚠R428	24382242	Res, Oxide Metal	2.4kΩ	J 1W
⚠R429	24382101	Res, Oxide Metal	100Ω	J 1W
R430	24366103	Res, Carbon	10kΩ	J 1/6W
R431	24327913	Res, Metal	91kΩ	F 1/4W
R432	24366102	Res, Carbon	1kΩ	J 1/6W
R433	24366102	Res, Carbon	1kΩ	J 1/6W
R434	24366183	Res, Carbon	18kΩ	J 1/6W
R435	24366473	Res, Carbon	47kΩ	J 1/6W
R436	24366102	Res, Carbon	1kΩ	J 1/6W
⚠R437	24382183	Res, Oxide Metal	18kΩ	J 1W
R438	24367243	Res, Carbon	24kΩ	G 1/6W
R439	24066878	Res, Variable	2kΩ	0.3W
R440	24367512	Res, Carbon	5.1kΩ	G 1/6W
⚠R441	24382331	Res, Oxide Metal	330Ω	J 1W
R450	24066879	Res, Variable	1kΩ	B 0.3W
R454	24366332	Res, Carbon	3.3kΩ	J 1/6W
R455	24366820	Res, Carbon	82Ω	J 1/6W
⚠R456	24383103	Res, Oxide Metal	10kΩ	J 2W
R457	24000946	Varistor	TNR9G560K	
⚠R458	24383103	Res, Oxide Metal	10kΩ	J 2W
R460	24366472	Res, Carbon	4.7kΩ	J 1/6W
⚠R461	24367753	Res, Carbon	75kΩ	G 1/6W
R462	24366103	Res, Carbon	10kΩ	J 1/6W
R463	24366302	Res, Carbon	3kΩ	J 1/6W
R468	24360102	Res, Carbon	1kΩ	J 1/8W
R471	24366473	Res, Carbon	47kΩ	J 1/6W
R472	24366823	Res, Carbon	82kΩ	J 1/6W
R480	24366472	Res, Carbon	4.7kΩ	J 1/6W
R482	24066877	Res, Variable	5kΩ	
⚠R483	24382103	Res, Oxide Metal	10kΩ	J 1W
R484	24942185	Res, Composition	1.8MΩ	J 1/2W
⚠R485	24552270	Res, Oxide Metal	27Ω	J 1/2W
R486	24366223	Res, Carbon	22kΩ	J 1/6W
⚠R487	24327103	Res, Metal	10kΩ	F 1/4W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
⚠R488	24327562	Res, Metal	5.6kΩ	F 1/4W
R489	24367103	Res, Carbon	10kΩ	G 1/6W
R490	24366823	Res, Carbon	82kΩ	J 1/6W
⚠R491	24382242	Res, Oxide Metal	2.4kΩ	J 1W
⚠R492	24367333	Res, Carbon	33kΩ	G 1/6W
⚠R493	24367103	Res, Carbon	10kΩ	G 1/6W
⚠R495	24366821	Res, Carbon	820Ω	J 1/6W
R496	24367623	Res, Carbon	62kΩ	G 1/6W
R497	24367623	Res, Carbon	62kΩ	G 1/6W
R498	24367753	Res, Carbon	75kΩ	G 1/6W
R499	24367563	Res, Carbon	56kΩ	G 1/6W
RE15	24366391	Res, Carbon	390Ω	J 1/6W
RE16	24366470	Res, Carbon	47Ω	J 1/6W
RE17	24366222	Res, Carbon	2.2kΩ	J 1/6W
RE18	24366103	Res, Carbon	10kΩ	J 1/6W
RE19	24366103	Res, Carbon	10kΩ	J 1/6W
RE20	24366472	Res, Carbon	4.7kΩ	J 1/6W
RE21	24366103	Res, Carbon	10kΩ	J 1/6W
RE22	24366472	Res, Carbon	4.7kΩ	J 1/6W
RE59	24381102	Res, Oxide Metal	1kΩ	J 1/2W
RE81	24367153	Res, Carbon	15kΩ	G 1/6W
RE82	24367103	Res, Carbon	10kΩ	G 1/6W
RE87	24366273	Res, Carbon	27kΩ	J 1/6W
RE88	24366474	Res, Carbon	470kΩ	J 1/6W
RE89	24327104	Res, Metal	100kΩ	F 1/4W
RE90	24327104	Res, Metal	100kΩ	F 1/4W
RE91	24327332	Res, Metal	3.3kΩ	F 1/4W
RE92	24327183	Res, Metal	18kΩ	F 1/4W
RE93	24381122	Res, Oxide Metal	1.2kΩ	J 1/2W
RE94	24383153	Res, Oxide Metal	15kΩ	J 2W
RE95	24366472	Res, Carbon	4.7kΩ	J 1/6W
RE96	24366101	Res, Carbon	100Ω	J 1/6W
		- MISCELLANEOUS -		
L441A	23960136	Bond		
P414	23164725	Plug	2P	
Q302C	A8012346	Spacer	AC238	
Q303C	A8012346	Spacer	AC238	
T404	23224997	Transformer	H Drive	
T420	23224997	Transformer	H Drive	
⚠T421	23228937	Transformer, Side DPC,	TPC2026	
⚠T461	23236445	Transformer, Flyback,	TFB5070AN	
⚠T462	23224349	Transformer, Pulse	TLN2174	
T470	23224346	Transformer, Focus	TLN2168	
Z470	23110835	Focus Power Block	TPA6025A	
■U004	23704022	PC Board Assy	Video	
		- INTEGRATED CIRCUITS -		
Q200	B0372960	IC	TA78L009AP	
Q501	B0384670	IC	TA8857N	
Q502	B0383881	IC	TA8772AN	
Q512	B0372540	IC	TA78005AP	
QA101	B0485746	IC	TC74HC165AP	
QA102	23905008	IC	CXA1315P	
QA103	23905008	IC	CXA1315P	
QA104	23905008	IC	CXA1315P	
QA105	B0485640	IC	TC74HCU04AP	
QP01	23904590	IC	CXA1024S	
QP02	23318700	IC	M51387P	
QP03	23119139	IC	AN5862K	
QP04	B0350510	IC	TA75558S	
QP05	B0350510	IC	TA75558S	
QP06	B0487588	IC	TC74HC4066AP	
QP08	23318916	IC	MC14053BCP	
QV70	70119726	IC	MC14052BCP	
QV87	23318916	IC	MC14053BCP	
QV88	23904099	IC	M52036SP	
		- TRANSISTORS -		
Q211	A6534053	Transistor	2SA1015-Y	
Q212	A6317440	Transistor	2SC1815-Y	
Q213	A6534053	Transistor	2SA1015-Y	
Q214	A6317440	Transistor	2SC1815-Y	
Q215	A6534053	Transistor	2SA1015-Y	
Q216	A6002040	Transistor	RN1204	
Q253	A6317440	Transistor	2SC1815-Y	
Q254	A6317440	Transistor	2SC1815-Y	

LOCATION NUMBER	PART NUMBER	DESCRIPTION	
Q4400	A6317440	Transistor	2SC1815-Y
Q505	A6317440	Transistor	2SC1815-Y
Q506	A6317440	Transistor	2SC1815-Y
Q508	A6317440	Transistor	2SC1815-Y
Q509	A6002040	Transistor	RN1204
Q510	A6002040	Transistor	RN1204
Q511	A6317440	Transistor	2SC1815-Y
Q513	A6002040	Transistor	RN1204
Q515	A6317440	Transistor	2SC1815-Y
QA106	A6002040	Transistor	RN1204
QA107	A6002040	Transistor	RN1204
QA108	A6002040	Transistor	RN1204
QB81	A6317440	Transistor	2SC1815-Y
QM02	A6534053	Transistor	2SA1015-Y
QM03	A6534053	Transistor	2SA1015-Y
QP07	A6002040	Transistor	RN1204
QP12	A6707961	Transistor	2SC380TM-Y
QP13	A6707961	Transistor	2SC380TM-Y
QP14	A6707961	Transistor	2SC380TM-Y
QP15	23114544	Transistor	2SA1206
QP16	23114544	Transistor	2SA1206
QP17	23114544	Transistor	2SA1206
QP18	A6317440	Transistor	2SC1815-Y
QP19	A6734590	Transistor	2SC752(G)
QP20	A6317440	Transistor	2SC1815-Y
QP21	A6734590	Transistor	2SC752(G)
QP22	A6734590	Transistor	2SC752(G)
QP23	A6734590	Transistor	2SC752(G)
QP24	A6317440	Transistor	2SC1815-Y
QP25	A6317440	Transistor	2SC1815-Y
QP26	A6317440	Transistor	2SC1815-Y
QP32	A6707961	Transistor	2SC380TM-Y
QP33	A6707961	Transistor	2SC380TM-Y
QP34	A6707961	Transistor	2SC380TM-Y
QP35	A6361120	Transistor	2SC3381-BL
QP36	A6361120	Transistor	2SC3381-BL
QP37	A6361120	Transistor	2SC3381-BL
QP38	A6361120	Transistor	2SC3381-BL
QP39	A6361120	Transistor	2SC3381-BL
QP40	A6361120	Transistor	2SC3381-BL
QP41	A6361120	Transistor	2SC3381-BL
QP42	A6361120	Transistor	2SC3381-BL
QP43	A6361120	Transistor	2SC3381-BL
QP44	A6707961	Transistor	2SC380TM-Y
QP45	A6707961	Transistor	2SC380TM-Y
QP46	A6707961	Transistor	2SC380TM-Y
QP47	A6002040	Transistor	RN1204
QP48	A6734590	Transistor	2SC752(G)
QP49	A6734590	Transistor	2SC752(G)
QP50	A6707961	Transistor	2SC380TM-Y
QP51	A6707961	Transistor	2SC380TM-Y
QP52	A6707961	Transistor	2SC380TM-Y
QP53	23114544	Transistor	2SA1206
QP54	23114544	Transistor	2SA1206
QP55	23114544	Transistor	2SA1206
QP56	23114544	Transistor	2SA1206
QP57	23114544	Transistor	2SA1206
QP58	23114544	Transistor	2SA1206
QP61	A6317440	Transistor	2SC1815-Y
QP62	A6317440	Transistor	2SC1815-Y
QP63	A6317440	Transistor	2SC1815-Y
QP64	A6317440	Transistor	2SC1815-Y
QP65	A6317440	Transistor	2SC1815-Y
QP66	A6317440	Transistor	2SC1815-Y
QP67	A6317440	Transistor	2SC1815-Y
QP68	A6317440	Transistor	2SC1815-Y
QP69	A6317440	Transistor	2SC1815-Y
QT09	A6317440	Transistor	2SC1815-Y
QV71	A6317440	Transistor	2SC1815-Y
QV72	A6317440	Transistor	2SC1815-Y
QV73	A6317440	Transistor	2SC1815-Y
QV74	A6317440	Transistor	2SC1815-Y
QV75	A6317440	Transistor	2SC1815-Y
QV76	A6317440	Transistor	2SC1815-Y
QV77	A6317440	Transistor	2SC1815-Y

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
QV78	A6317440	Transistor	2SC1815-Y	
QV79	A6317440	Transistor	2SC1815-Y	
QV82	A6534053	Transistor	2SA1015-Y	
QV83	A6534053	Transistor	2SA1015-Y	
QV84	A6534053	Transistor	2SA1015-Y	
QV85	A6534053	Transistor	2SA1015-Y	
QV89	A6317440	Transistor	2SC1815-Y	
QV90	A6317440	Transistor	2SC1815-Y	
QV91	A6342206	Transistor	2SC2878-A	
		- DIODES -		
D200	A7150258	Diode	1SS176FA	
D204	A7150258	Diode	1SS176FA	
D231	A7150258	Diode	1SS176FA	
D232	A7150258	Diode	1SS176FA	
D4400	23118859	Diode	1SS133	
D4401	23316321	Diode, Zener	UZ8.2BSB	
D4402	23316284	Diode, Zener	UZ2.2BSA	
D4403	23316324	Diode, Zener	UZ9.1BSB	
D4404	23316327	Diode, Zener	UZ10BSB	
D4405	23316792	Diode	SC215	
D502	A7150258	Diode	1SS176FA	
D503	A7150258	Diode	1SS176FA	
D507	A7150258	Diode	1SS176FA	
D508	A7150258	Diode	1SS176FA	
D510	23316324	Diode, Zener	UZ9.1BSB	
D511	23316324	Diode, Zener	UZ9.1BSB	
D512	23316324	Diode, Zener	UZ9.1BSB	
D513	23316324	Diode, Zener	UZ9.1BSB	
D516	23115537	Diode	1SS131	
D517	A7150258	Diode	1SS176FA	
D518	A7150258	Diode	1SS176FA	
D560	23316306	Diode, Zener	UZ5.1BSB	
DA81	23358519	Diode, LED	MBG4361F	
DA82	23316302	Diode, Zener	UZ4.7BSB	
DA83	23316302	Diode, Zener	UZ4.7BSB	
DA84	23316302	Diode, Zener	UZ4.7BSB	
DA85	23316302	Diode, Zener	UZ4.7BSB	
DA86	23316302	Diode, Zener	UZ4.7BSB	
DA87	23316302	Diode, Zener	UZ4.7BSB	
DA88	23316312	Diode, Zener	UZ6.2BSB	
DA89	23316333	Diode, Zener	UZ12BSB	
DP02	A7150258	Diode	1SS176FA	
DP03	A7150258	Diode	1SS176FA	
DP04	A7150258	Diode	1SS176FA	
DP05	A7150258	Diode	1SS176FA	
DP06	A7150258	Diode	1SS176FA	
DP07	A7150258	Diode	1SS176FA	
DP08	A7150258	Diode	1SS176FA	
DP09	A7150258	Diode	1SS176FA	
DP10	A7150258	Diode	1SS176FA	
DP11	A7150258	Diode	1SS176FA	
DP12	A7150258	Diode	1SS176FA	
DP13	A7150258	Diode	1SS176FA	
DP14	A7150258	Diode	1SS176FA	
DP15	A7150258	Diode	1SS176FA	
DP16	A7150258	Diode	1SS176FA	
DP17	A7150258	Diode	1SS176FA	
DP18	A7150258	Diode	1SS176FA	
DP19	A7150258	Diode	1SS176FA	
DP20	A7150258	Diode	1SS176FA	
DP21	A7150258	Diode	1SS176FA	
DP22	A7150258	Diode	1SS176FA	
DP23	A7150258	Diode	1SS176FA	
DP24	A7150258	Diode	1SS176FA	
DP25	23316333	Diode, Zener	UZ12BSB	
DP32	A7150258	Diode	1SS176FA	
DP33	A7150258	Diode	1SS176FA	
DP34	A7150258	Diode	1SS176FA	
DP35	A7150258	Diode	1SS176FA	
DP36	A7150258	Diode	1SS176FA	
DP37	A7150258	Diode	1SS176FA	
DP41	A7150258	Diode	1SS176FA	
DP42	A7150258	Diode	1SS176FA	
DP43	A7150258	Diode	1SS176FA	
DP44	A7150258	Diode	1SS176FA	
DP45	A7150258	Diode	1SS176FA	
DP46	A7150258	Diode	1SS176FA	
DP47	A7150258	Diode	1SS176FA	
DP48	A7150258	Diode	1SS176FA	
DP49	A7150258	Diode	1SS176FA	
DP50	A7150258	Diode	1SS176FA	
DV71	23316333	Diode, Zener	UZ12BSB	
DV72	23316333	Diode, Zener	UZ12BSB	
DV73	23316333	Diode, Zener	UZ12BSB	
DV75	23316333	Diode, Zener	UZ12BSB	
DV76	23316333	Diode, Zener	UZ12BSB	
DV77	23316333	Diode, Zener	UZ12BSB	
DV81	A7150258	Diode	1SS176FA	
DV82	A7150258	Diode	1SS176FA	
DV83	23316333	Diode, Zener	UZ12BSB	
		- COILS -		
L250	23238708	Coil, Peaking	TRF4330AJ	
L251	23238710	Coil, Peaking	TRF4220AJ	
L252	23238710	Coil, Peaking	TRF4220AJ	
L253	23289100	Coil, Peaking	TRF4100AF	
L4400	23238710	Coil, Peaking	TRF4220AJ	
L4401	23289100	Coil, Peaking	TRF4100AF	
L4402	23238714	Coil, Peaking	TRF4100AJ	
L4403	23221685	Coil, Choke	TLN3193	
LB71	23238714	Coil, Peaking	TRF4100AJ	
LD02	23238562	Coil, Peaking	TRF4109AJ	
LP01	23238714	Coil, Peaking	TRF4100AJ	
LP02	23238714	Coil, Peaking	TRF4100AJ	
LT07	23238714	Coil, Peaking	TRF4100AJ	
		- CAPACITORS -		
C200	24538104	Cap, Plastic	0.1μF	J 50V
C201	24538104	Cap, Plastic	0.1μF	J 50V
C202	24666101	Cap, Electrolytic	100μF	M 16V
C250	24473180	Cap, Ceramic	18pF	J 50V
C251	24473100	Cap, Ceramic	10pF	J 50V
C253	24473470	Cap, Ceramic	47pF	J 50V
C255	24473100	Cap, Ceramic	10pF	J 50V
C257	24473150	Cap, Ceramic	15pF	J 50V
C258	24473330	Cap, Ceramic	33pF	J 50V
C260	24436150	Cap, Ceramic	15pF	J 50V
C261	24436180	Cap, Ceramic	18pF	J 50V
C271	24668100	Cap, Electrolytic	10μF	M 35V
C4400	24747229	Cap, Electrolytic	2.2μF	M 50V
C4401	24666101	Cap, Electrolytic	100μF	M 16V
C4402	24232103	Cap, Ceramic	0.01μF	Z 50V
C4403	24617923	Cap, Electrolytic	82μF	M 16V
C4404	24666471	Cap, Electrolytic	470μF	M 16V
C4405	24590123	Cap, Plastic	0.012μF	J 50V
C4406	24590822	Cap, Plastic	8200pF	J 50V
C4407	24747109	Cap, Electrolytic	1μF	M 50V
C4408	24538104	Cap, Plastic	0.1μF	J 50V
C510	24538104	Cap, Plastic	0.1μF	J 50V
C511	24538104	Cap, Plastic	0.1μF	J 50V
C512	24538104	Cap, Plastic	0.1μF	J 50V
C513	24591473	Cap, Plastic	0.047μF	J 50V
C515	24232103	Cap, Ceramic	0.01μF	Z 50V
C517	24666471	Cap, Electrolytic	470μF	M 16V
C518	24591473	Cap, Plastic	0.047μF	J 50V
C520	24212102	Cap, Ceramic	1000pF	K 50V
C521	24538104	Cap, Plastic	0.1μF	J 50V
C522	24473470	Cap, Ceramic	47pF	J 50V
C524	24212102	Cap, Ceramic	1000pF	K 50V
C525	24436080	Cap, Ceramic	8pF	J 50V
C526	24436080	Cap, Ceramic	8pF	J 50V
C527	24436080	Cap, Ceramic	8pF	J 50V
C528	24669010	Cap, Electrolytic	1μF	M 50V
C529	24590332	Cap, Plastic	3300pF	J 50V
C530	24232103	Cap, Ceramic	0.01μF	Z 50V
C531	24666101	Cap, Electrolytic	100μF	M 16V
C533	24353120	Cap, Ceramic	12pF	J 50V
C534	24590103	Cap, Plastic	0.01μF	J 50V
C535	24353120	Cap, Ceramic	12pF	J 50V
C536	24590103	Cap, Plastic	0.01μF	J 50V
C537	24666100	Cap, Electrolytic	10μF	M 16V
C540	24232103	Cap, Ceramic	0.01μF	Z 50V

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
C541	24232103	Cap, Ceramic	0.01μF	Z 50V
C542	24538104	Cap, Plastic	0.1μF	J 50V
C543	24232103	Cap, Ceramic	0.01μF	Z 50V
C544	24669339	Cap, Electrolytic	3.3μF	M 50V
C545	24590103	Cap, Plastic	0.01μF	J 50V
C546	24538104	Cap, Plastic	0.1μF	J 50V
C547	24666470	Cap, Electrolytic	47μF	M 16V
C548	24232103	Cap, Ceramic	0.01μF	Z 50V
C549	24538104	Cap, Plastic	0.1μF	J 50V
C550	24538104	Cap, Plastic	0.1μF	J 50V
C551	24669100	Cap, Electrolytic	10μF	M 50V
C552	24538104	Cap, Plastic	0.1μF	J 50V
C553	24538104	Cap, Plastic	0.1μF	J 50V
C554	24669478	Cap, Electrolytic	0.47μF	M 50V
C555	24666101	Cap, Electrolytic	100μF	M 16V
C556	24232103	Cap, Ceramic	0.01μF	Z 50V
C557	24669478	Cap, Electrolytic	0.47μF	M 50V
C558	24590103	Cap, Plastic	0.01μF	J 50V
C559	24538104	Cap, Plastic	0.1μF	J 50V
C560	24538104	Cap, Plastic	0.1μF	J 50V
C561	24747478	Cap, Electrolytic	0.47μF	M 50V
C562	24747478	Cap, Electrolytic	0.47μF	M 50V
C563	24669010	Cap, Electrolytic	1μF	M 50V
C565	24669010	Cap, Electrolytic	1μF	M 50V
C566	24669010	Cap, Electrolytic	1μF	M 50V
C572	24669471	Cap, Electrolytic	470μF	M 50V
C573	24666470	Cap, Electrolytic	47μF	M 16V
C575	24666100	Cap, Electrolytic	10μF	M 16V
C576	24666470	Cap, Electrolytic	47μF	M 16V
CA101	24232103	Cap, Ceramic	0.01μF	Z 50V
CA102	24538104	Cap, Plastic	0.1μF	J 50V
CA103	24538104	Cap, Plastic	0.1μF	J 50V
CA104	24538104	Cap, Plastic	0.1μF	J 50V
CA105	24666470	Cap, Electrolytic	47μF	M 16V
CA106	24591104	Cap, Plastic	0.1μF	J 50V
CA107	24473300	Cap, Ceramic	30pF	J 50V
CA108	24473300	Cap, Ceramic	30pF	J 50V
CP05	24666101	Cap, Electrolytic	100μF	M 16V
CP06	24232103	Cap, Ceramic	0.01μF	Z 50V
CP07	24666221	Cap, Electrolytic	220μF	M 16V
CP09	24232103	Cap, Ceramic	0.01μF	Z 50V
CP10	24232103	Cap, Ceramic	0.01μF	Z 50V
CP101	24232103	Cap, Ceramic	0.01μF	Z 50V
CP102	24232103	Cap, Ceramic	0.01μF	Z 50V
CP103	24232103	Cap, Ceramic	0.01μF	Z 50V
CP11	24232103	Cap, Ceramic	0.01μF	Z 50V
CP12	24591472	Cap, Plastic	4700pF	J 50V
CP13	24591472	Cap, Plastic	4700pF	J 50V
CP131	24232103	Cap, Ceramic	0.01μF	Z 50V
CP132	24232103	Cap, Ceramic	0.01μF	Z 50V
CP133	24232103	Cap, Ceramic	0.01μF	Z 50V
CP14	24591472	Cap, Plastic	4700pF	J 50V
CP15	24591473	Cap, Plastic	0.047μF	J 50V
CP16	24591473	Cap, Plastic	0.047μF	J 50V
CP17	24591473	Cap, Plastic	0.047μF	J 50V
CP18	24666100	Cap, Electrolytic	10μF	M 16V
CP19	24232103	Cap, Ceramic	0.01μF	Z 50V
CP20	24666100	Cap, Electrolytic	10μF	M 16V
CP21	24232103	Cap, Ceramic	0.01μF	Z 50V
CP22	24669010	Cap, Electrolytic	1μF	M 50V
CP23	24669010	Cap, Electrolytic	1μF	M 50V
CP24	24669010	Cap, Electrolytic	1μF	M 50V
CP25	24669010	Cap, Electrolytic	1μF	M 50V
CP26	24669010	Cap, Electrolytic	1μF	M 50V
CP27	24669010	Cap, Electrolytic	1μF	M 50V
CP28	24232103	Cap, Ceramic	0.01μF	Z 50V
CP29	24232103	Cap, Ceramic	0.01μF	Z 50V
CP30	24666101	Cap, Electrolytic	100μF	M 16V
CP31	24666101	Cap, Electrolytic	100μF	M 16V
CP32	24669229	Cap, Electrolytic	2.2μF	M 50V
CP33	24669229	Cap, Electrolytic	2.2μF	M 50V
CP34	24669229	Cap, Electrolytic	2.2μF	M 50V
CP35	24232103	Cap, Ceramic	0.01μF	Z 50V
CP36	24232103	Cap, Ceramic	0.01μF	Z 50V
CP37	24666101	Cap, Electrolytic	100μF	M 16V

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
CP38	24666101	Cap, Electrolytic	100μF	M 16V
CP39	24666470	Cap, Electrolytic	47μF	M 16V
CP40	24666470	Cap, Electrolytic	47μF	M 16V
CP41	24666470	Cap, Electrolytic	47μF	M 16V
CP42	24666470	Cap, Electrolytic	47μF	M 16V
CP43	24666470	Cap, Electrolytic	47μF	M 16V
CP44	24666470	Cap, Electrolytic	47μF	M 16V
CP45	24232103	Cap, Ceramic	0.01μF	Z 50V
CP46	24232103	Cap, Ceramic	0.01μF	Z 50V
CP47	24232103	Cap, Ceramic	0.01μF	Z 50V
CP48	24666100	Cap, Electrolytic	10μF	M 16V
CP49	24666100	Cap, Electrolytic	10μF	M 16V
CP50	24666100	Cap, Electrolytic	10μF	M 16V
CP51	24666100	Cap, Electrolytic	10μF	M 16V
CP52	24232103	Cap, Ceramic	0.01μF	Z 50V
CP53	24232103	Cap, Ceramic	0.01μF	Z 50V
CP54	24232103	Cap, Ceramic	0.01μF	Z 50V
CP55	24232103	Cap, Ceramic	0.01μF	Z 50V
CP62	24232103	Cap, Ceramic	0.01μF	Z 50V
CP63	24232103	Cap, Ceramic	0.01μF	Z 50V
CP64	24232103	Cap, Ceramic	0.01μF	Z 50V
CP65	24591472	Cap, Plastic	4700pF	J 50V
CP66	24591472	Cap, Plastic	4700pF	J 50V
CP67	24591472	Cap, Plastic	4700pF	J 50V
CP68	24232103	Cap, Ceramic	0.01μF	Z 50V
CP69	24232103	Cap, Ceramic	0.01μF	Z 50V
CP70	24232103	Cap, Ceramic	0.01μF	Z 50V
CP71	24666100	Cap, Electrolytic	10μF	M 16V
CP72	24666100	Cap, Electrolytic	10μF	M 16V
CP73	24666100	Cap, Electrolytic	10μF	M 16V
CP80	24666101	Cap, Electrolytic	100μF	M 16V
CP81	24232103	Cap, Ceramic	0.01μF	Z 50V
CP82	24666470	Cap, Electrolytic	47μF	M 16V
CP83	24666101	Cap, Electrolytic	100μF	M 16V
CP85	24591104	Cap, Plastic	0.1μF	J 50V
CP86	24666100	Cap, Electrolytic	10μF	M 16V
CP87	24591104	Cap, Plastic	0.1μF	J 50V
CP88	24591104	Cap, Plastic	0.1μF	J 50V
CP89	24666100	Cap, Electrolytic	10μF	M 16V
CP90	24591104	Cap, Plastic	0.1μF	J 50V
CP91	24591104	Cap, Plastic	0.1μF	J 50V
CP92	24666100	Cap, Electrolytic	10μF	M 16V
CP93	24591104	Cap, Plastic	0.1μF	J 50V
CP94	24085946	Cap, Electrolytic	10μF	M 16V
CP95	24085946	Cap, Electrolytic	10μF	M 16V
CP96	24085946	Cap, Electrolytic	10μF	M 16V
CP97	24591104	Cap, Plastic	0.1μF	J 50V
CP98	24666101	Cap, Electrolytic	100μF	M 16V
CT13	24473200	Cap, Ceramic	20pF	J 50V
CT14	24436101	Cap, Ceramic	100pF	J 50V
CV101	24666100	Cap, Electrolytic	10μF	M 16V
CV102	24666100	Cap, Electrolytic	10μF	M 16V
CV103	24666100	Cap, Electrolytic	10μF	M 16V
CV104	24666100	Cap, Electrolytic	10μF	M 16V
CV105	24666100	Cap, Electrolytic	10μF	M 16V
CV106	24666100	Cap, Electrolytic	10μF	M 16V
CV107	24666100	Cap, Electrolytic	10μF	M 16V
CV108	24666100	Cap, Electrolytic	10μF	M 16V
CV109	24666100	Cap, Electrolytic	10μF	M 16V
CV112	24666101	Cap, Electrolytic	100μF	M 16V
CV114	24666101	Cap, Electrolytic	100μF	M 16V
CV115	24666101	Cap, Electrolytic	100μF	M 16V
CV116	24666470	Cap, Electrolytic	47μF	M 16V
CV117	24666470	Cap, Electrolytic	47μF	M 16V
CV118	24666470	Cap, Electrolytic	47μF	M 16V
CV119	24666100	Cap, Electrolytic	10μF	M 16V
CV121	24591104	Cap, Plastic	0.1μF	J 50V
CV122	24666100	Cap, Electrolytic	10μF	M 16V
CV123	24085946	Cap, Electrolytic	10μF	M 16V
CV124	24591104	Cap, Plastic	0.1μF	J 50V
CV125	24232103	Cap, Ceramic	0.01μF	Z 50V
CV126	24666100	Cap, Electrolytic	10μF	M 16V
CV127	24591472	Cap, Plastic	4700pF	J 50V
CV128	24747479	Cap, Electrolytic	4.7μF	M 50V
CV129	24085007	Cap, Electrolytic	4.7μF	M 35V

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
CV130	24669010	Cap, Electrolytic	1μF	M 50V
CV132	24666100	Cap, Electrolytic	10μF	M 16V
CV133	24232103	Cap, Ceramic	0.01μF	Z 50V
CV134	24473330	Cap, Ceramic	33pF	J 50V
CV135	24436151	Cap, Ceramic	150pF	J 50V
CV136	24436151	Cap, Ceramic	150pF	J 50V
		- RESISTORS -		
R216	24366223	Res, Carbon	22kΩ	J 1/6W
R226	24366123	Res, Carbon	12kΩ	J 1/6W
R227	24366103	Res, Carbon	10kΩ	J 1/6W
R250	24366221	Res, Carbon	220Ω	J 1/6W
R254	24366122	Res, Carbon	1.2kΩ	J 1/6W
R256	24366561	Res, Carbon	560Ω	J 1/6W
R258	24366122	Res, Carbon	1.2kΩ	J 1/6W
R265	24366822	Res, Carbon	8.2kΩ	J 1/6W
R266	24366562	Res, Carbon	5.6kΩ	J 1/6W
R267	24366822	Res, Carbon	8.2kΩ	J 1/6W
R268	24366562	Res, Carbon	5.6kΩ	J 1/6W
R269	24366222	Res, Carbon	2.2kΩ	J 1/6W
R270	24366222	Res, Carbon	2.2kΩ	J 1/6W
R291	24366102	Res, Carbon	1kΩ	J 1/6W
R292	24366103	Res, Carbon	10kΩ	J 1/6W
R293	24366101	Res, Carbon	100Ω	J 1/6W
R294	24366103	Res, Carbon	10kΩ	J 1/6W
R295	24366752	Res, Carbon	7.5kΩ	J 1/6W
R296	24366392	Res, Carbon	3.9kΩ	J 1/6W
R297	24366392	Res, Carbon	3.9kΩ	J 1/6W
R298	24366103	Res, Carbon	10kΩ	J 1/6W
R299	24366221	Res, Carbon	220Ω	J 1/6W
R4400	24366183	Res, Carbon	18kΩ	J 1/6W
R4401	24366391	Res, Carbon	390Ω	J 1/6W
R4402	24553221	Res, Oxide Metal	220Ω	J 1W
R4403	24552391	Res, Oxide Metal	390Ω	J 1/2W
R4404	24366101	Res, Carbon	100Ω	J 1/6W
R4405	24366682	Res, Carbon	6.8kΩ	J 1/6W
R4406	24366562	Res, Carbon	5.6kΩ	J 1/6W
R4408	24366103	Res, Carbon	10kΩ	J 1/6W
R4409	24366272	Res, Carbon	2.7kΩ	J 1/6W
R4410	24366102	Res, Carbon	1kΩ	J 1/6W
R4411	24366473	Res, Carbon	47kΩ	J 1/6W
R4412	24366473	Res, Carbon	47kΩ	J 1/6W
R508	24366102	Res, Carbon	1kΩ	J 1/6W
R509	24366101	Res, Carbon	100Ω	J 1/6W
R510	24366123	Res, Carbon	12kΩ	J 1/6W
R513	24366222	Res, Carbon	2.2kΩ	J 1/6W
R515	24366331	Res, Carbon	330Ω	J 1/6W
R516	24366331	Res, Carbon	330Ω	J 1/6W
R517	24366331	Res, Carbon	330Ω	J 1/6W
R520	24366103	Res, Carbon	10kΩ	J 1/6W
R521	24366225	Res, Carbon	2.2MΩ	J 1/6W
R522	24366225	Res, Carbon	2.2MΩ	J 1/6W
R523	24366333	Res, Carbon	33kΩ	J 1/6W
R524	24366302	Res, Carbon	3kΩ	J 1/6W
R525	24366823	Res, Carbon	82kΩ	J 1/6W
R526	24366103	Res, Carbon	10kΩ	J 1/6W
R527	24366103	Res, Carbon	10kΩ	J 1/6W
R528	24366102	Res, Carbon	1kΩ	J 1/6W
R532	24366272	Res, Carbon	2.7kΩ	J 1/6W
R533	24366564	Res, Carbon	560kΩ	J 1/6W
R534	24366394	Res, Carbon	390kΩ	J 1/6W
R535	24366102	Res, Carbon	1kΩ	J 1/6W
R536	24366102	Res, Carbon	1kΩ	J 1/6W
R537	24366103	Res, Carbon	10kΩ	J 1/6W
R539	24366473	Res, Carbon	47kΩ	J 1/6W
R541	24366103	Res, Carbon	10kΩ	J 1/6W
R542	24366183	Res, Carbon	18kΩ	J 1/6W
R543	24366103	Res, Carbon	10kΩ	J 1/6W
R544	24366102	Res, Carbon	1kΩ	J 1/6W
R545	24366102	Res, Carbon	1kΩ	J 1/6W
R546	24366223	Res, Carbon	22kΩ	J 1/6W
R547	24366472	Res, Carbon	4.7kΩ	J 1/6W
R548	24366104	Res, Carbon	100kΩ	J 1/6W
R549	24366103	Res, Carbon	10kΩ	J 1/6W
R550	24366103	Res, Carbon	10kΩ	J 1/6W
R560	24552221	Res, Oxide Metal	220Ω	J 1/2W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
R561	24366561	Res, Carbon	560Ω	J 1/6W
R562	24366561	Res, Carbon	560Ω	J 1/6W
RA180	24366102	Res, Carbon	1kΩ	J 1/6W
RA181	24366331	Res, Carbon	330Ω	J 1/6W
RA183	24366102	Res, Carbon	1kΩ	J 1/6W
RA184	24366101	Res, Carbon	100Ω	J 1/6W
RA185	24366101	Res, Carbon	100Ω	J 1/6W
RA186	24366101	Res, Carbon	100Ω	J 1/6W
RA187	24366223	Res, Carbon	22kΩ	J 1/6W
RA188	24366223	Res, Carbon	22kΩ	J 1/6W
RA189	24366153	Res, Carbon	15kΩ	J 1/6W
RA190	24366223	Res, Carbon	22kΩ	J 1/6W
RA191	24366223	Res, Carbon	22kΩ	J 1/6W
RA192	24366153	Res, Carbon	15kΩ	J 1/6W
RA193	24366223	Res, Carbon	22kΩ	J 1/6W
RA194	24366223	Res, Carbon	22kΩ	J 1/6W
RA195	24366153	Res, Carbon	15kΩ	J 1/6W
RA196	24366223	Res, Carbon	22kΩ	J 1/6W
RA197	24366223	Res, Carbon	22kΩ	J 1/6W
RA198	24366153	Res, Carbon	15kΩ	J 1/6W
RA199	24366102	Res, Carbon	1kΩ	J 1/6W
RA200	24366102	Res, Carbon	1kΩ	J 1/6W
RA201	24366102	Res, Carbon	1kΩ	J 1/6W
RA202	24366101	Res, Carbon	100Ω	J 1/6W
RA203	24366101	Res, Carbon	100Ω	J 1/6W
RA204	24366101	Res, Carbon	100Ω	J 1/6W
RA207	24366103	Res, Carbon	10kΩ	J 1/6W
RA208	24366101	Res, Carbon	100Ω	J 1/6W
RA209	24366101	Res, Carbon	100Ω	J 1/6W
RA210	24366101	Res, Carbon	100Ω	J 1/6W
RA211	24366101	Res, Carbon	100Ω	J 1/6W
RA212	24366101	Res, Carbon	100Ω	J 1/6W
RA213	24366101	Res, Carbon	100Ω	J 1/6W
RA214	24366101	Res, Carbon	100Ω	J 1/6W
RA215	24366223	Res, Carbon	22kΩ	J 1/6W
RA216	24366223	Res, Carbon	22kΩ	J 1/6W
RA217	24366223	Res, Carbon	22kΩ	J 1/6W
RA218	24366102	Res, Carbon	1kΩ	J 1/6W
RA219	24366102	Res, Carbon	1kΩ	J 1/6W
RA220	24366102	Res, Carbon	1kΩ	J 1/6W
RA222	24366102	Res, Carbon	1kΩ	J 1/6W
RA223	24366225	Res, Carbon	2.2MΩ	J 1/6W
RB90	24366104	Res, Carbon	100kΩ	J 1/6W
RB98	24366332	Res, Carbon	3.3kΩ	J 1/6W
RB99	24366332	Res, Carbon	3.3kΩ	J 1/6W
RM09	24366821	Res, Carbon	820Ω	J 1/6W
RM10	24366272	Res, Carbon	2.7kΩ	J 1/6W
RM11	24366821	Res, Carbon	820Ω	J 1/6W
RM19	24366271	Res, Carbon	270Ω	J 1/6W
RM20	24366473	Res, Carbon	47kΩ	J 1/6W
RP01	24366390	Res, Carbon	39Ω	J 1/6W
RP02	24366390	Res, Carbon	39Ω	J 1/6W
RP03	24366390	Res, Carbon	39Ω	J 1/6W
RP04	24552511	Res, Oxide Metal	510Ω	J 1/2W
RP05	24552511	Res, Oxide Metal	510Ω	J 1/2W
RP06	24552511	Res, Oxide Metal	510Ω	J 1/2W
RP07	24366101	Res, Carbon	100Ω	J 1/6W
RP08	24366101	Res, Carbon	100Ω	J 1/6W
RP09	24366101	Res, Carbon	100Ω	J 1/6W
RP10	24366102	Res, Carbon	1kΩ	J 1/6W
RP101	24552430	Res, Oxide Metal	43Ω	J 1/2W
RP102	24366102	Res, Carbon	1kΩ	J 1/6W
RP103	24366102	Res, Carbon	1kΩ	J 1/6W
RP104	24366102	Res, Carbon	1kΩ	J 1/6W
RP105	24366102	Res, Carbon	1kΩ	J 1/6W
RP106	24366102	Res, Carbon	1kΩ	J 1/6W
RP107	24366102	Res, Carbon	1kΩ	J 1/6W
RP108	24366471	Res, Carbon	470Ω	J 1/6W
RP109	24366471	Res, Carbon	470Ω	J 1/6W
RP11	24366102	Res, Carbon	1kΩ	J 1/6W
RP110	24366471	Res, Carbon	470Ω	J 1/6W
RP111	24366471	Res, Carbon	470Ω	J 1/6W
RP112	24366471	Res, Carbon	470Ω	J 1/6W
RP113	24366471	Res, Carbon	470Ω	J 1/6W
RP114	24366102	Res, Carbon	1kΩ	J 1/6W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
RP115	24366102	Res, Carbon	1kΩ	J 1/6W
RP116	24366102	Res, Carbon	1kΩ	J 1/6W
RP117	24366102	Res, Carbon	1kΩ	J 1/6W
RP118	24366102	Res, Carbon	1kΩ	J 1/6W
RP119	24366102	Res, Carbon	1kΩ	J 1/6W
RP12	24366102	Res, Carbon	1kΩ	J 1/6W
RP120	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP121	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP122	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP123	24366302	Res, Carbon	3kΩ	J 1/6W
RP124	24366302	Res, Carbon	3kΩ	J 1/6W
RP125	24366302	Res, Carbon	3kΩ	J 1/6W
RP126	24366102	Res, Carbon	1kΩ	J 1/6W
RP127	24366102	Res, Carbon	1kΩ	J 1/6W
RP128	24366102	Res, Carbon	1kΩ	J 1/6W
RP129	24366471	Res, Carbon	470Ω	J 1/6W
RP13	24366101	Res, Carbon	100Ω	J 1/6W
RP130	24366471	Res, Carbon	470Ω	J 1/6W
RP131	24366471	Res, Carbon	470Ω	J 1/6W
RP132	24367822	Res, Carbon	8. 2kΩ	G 1/6W
RP133	24367302	Res, Carbon	3kΩ	G 1/6W
RP134	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP135	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP136	24366103	Res, Carbon	10kΩ	J 1/6W
RP137	24366331	Res, Carbon	330Ω	J 1/6W
RP138	24366331	Res, Carbon	330Ω	J 1/6W
RP139	24366331	Res, Carbon	330Ω	J 1/6W
RP14	24366101	Res, Carbon	100Ω	J 1/6W
RP140	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP141	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP145	24366333	Res, Carbon	33kΩ	J 1/6W
RP146	24366163	Res, Carbon	16kΩ	J 1/6W
RP147	24366333	Res, Carbon	33kΩ	J 1/6W
RP148	24366333	Res, Carbon	33kΩ	J 1/6W
RP149	24366333	Res, Carbon	33kΩ	J 1/6W
RP15	24366101	Res, Carbon	100Ω	J 1/6W
RP150	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP151	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP152	24366333	Res, Carbon	33kΩ	J 1/6W
RP153	24366163	Res, Carbon	16kΩ	J 1/6W
RP154	24366333	Res, Carbon	33kΩ	J 1/6W
RP155	24366333	Res, Carbon	33kΩ	J 1/6W
RP156	24366333	Res, Carbon	33kΩ	J 1/6W
RP157	24366333	Res, Carbon	33kΩ	J 1/6W
RP158	24366163	Res, Carbon	16kΩ	J 1/6W
RP159	24366333	Res, Carbon	33kΩ	J 1/6W
RP16	24366153	Res, Carbon	15kΩ	J 1/6W
RP160	24366333	Res, Carbon	33kΩ	J 1/6W
RP161	24366333	Res, Carbon	33kΩ	J 1/6W
RP162	24366333	Res, Carbon	33kΩ	J 1/6W
RP163	24366333	Res, Carbon	33kΩ	J 1/6W
RP164	24366333	Res, Carbon	33kΩ	J 1/6W
RP165	24366223	Res, Carbon	22kΩ	J 1/6W
RP17	24366153	Res, Carbon	15kΩ	J 1/6W
RP170	24366392	Res, Carbon	3. 9kΩ	J 1/6W
RP171	24366392	Res, Carbon	3. 9kΩ	J 1/6W
RP172	24366392	Res, Carbon	3. 9kΩ	J 1/6W
RP173	24366682	Res, Carbon	6. 8kΩ	J 1/6W
RP174	24366682	Res, Carbon	6. 8kΩ	J 1/6W
RP175	24366682	Res, Carbon	6. 8kΩ	J 1/6W
RP176	24366331	Res, Carbon	330Ω	J 1/6W
RP177	24366331	Res, Carbon	330Ω	J 1/6W
RP178	24366331	Res, Carbon	330Ω	J 1/6W
RP179	24366471	Res, Carbon	470Ω	J 1/6W
RP18	24366153	Res, Carbon	15kΩ	J 1/6W
RP180	24366471	Res, Carbon	470Ω	J 1/6W
RP181	24366471	Res, Carbon	470Ω	J 1/6W
RP182	24366391	Res, Carbon	390Ω	J 1/6W
RP183	24366391	Res, Carbon	390Ω	J 1/6W
RP184	24366391	Res, Carbon	390Ω	J 1/6W
RP188	24366471	Res, Carbon	470Ω	J 1/6W
RP189	24366471	Res, Carbon	470Ω	J 1/6W
RP19	24366103	Res, Carbon	10kΩ	J 1/6W
RP190	24366471	Res, Carbon	470Ω	J 1/6W
RP191	24366361	Res, Carbon	360Ω	J 1/6W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
RP192	24366361	Res, Carbon	360Ω	J 1/6W
RP193	24366361	Res, Carbon	360Ω	J 1/6W
RP194	24366331	Res, Carbon	330Ω	J 1/6W
RP195	24366331	Res, Carbon	330Ω	J 1/6W
RP196	24366331	Res, Carbon	330Ω	J 1/6W
RP197	24366391	Res, Carbon	390Ω	J 1/6W
RP198	24366391	Res, Carbon	390Ω	J 1/6W
RP199	24366391	Res, Carbon	390Ω	J 1/6W
RP20	24366103	Res, Carbon	10kΩ	J 1/6W
RP200	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP201	24366152	Res, Carbon	1. 5kΩ	J 1/6W
RP208	24366683	Res, Carbon	68kΩ	J 1/6W
RP209	24366683	Res, Carbon	68kΩ	J 1/6W
RP21	24366103	Res, Carbon	10kΩ	J 1/6W
RP210	24366683	Res, Carbon	68kΩ	J 1/6W
RP211	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP212	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP213	24366331	Res, Carbon	330Ω	J 1/6W
RP214	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP215	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP216	24366331	Res, Carbon	330Ω	J 1/6W
RP217	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP218	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP219	24366331	Res, Carbon	330Ω	J 1/6W
RP22	24366103	Res, Carbon	10kΩ	J 1/6W
RP23	24366103	Res, Carbon	10kΩ	J 1/6W
RP24	24366103	Res, Carbon	10kΩ	J 1/6W
RP272	24366101	Res, Carbon	100Ω	J 1/6W
RP273	24366101	Res, Carbon	100Ω	J 1/6W
RP274	24366101	Res, Carbon	100Ω	J 1/6W
RP28	24366101	Res, Carbon	100Ω	J 1/6W
RP29	24366101	Res, Carbon	100Ω	J 1/6W
RP30	24366101	Res, Carbon	100Ω	J 1/6W
RP31	24366101	Res, Carbon	100Ω	J 1/6W
RP32	24366101	Res, Carbon	100Ω	J 1/6W
RP33	24366101	Res, Carbon	100Ω	J 1/6W
RP34	24366101	Res, Carbon	100Ω	J 1/6W
RP35	24366222	Res, Carbon	2. 2kΩ	J 1/6W
RP36	24366221	Res, Carbon	220Ω	J 1/6W
RP37	24366104	Res, Carbon	100kΩ	J 1/6W
RP38	24366104	Res, Carbon	100kΩ	J 1/6W
RP39	24366102	Res, Carbon	1kΩ	J 1/6W
RP40	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP41	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP42	24366103	Res, Carbon	10kΩ	J 1/6W
RP43	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RP44	24366103	Res, Carbon	10kΩ	J 1/6W
RP45	24366562	Res, Carbon	5. 6kΩ	J 1/6W
RP46	24366102	Res, Carbon	1kΩ	J 1/6W
RP47	24366102	Res, Carbon	1kΩ	J 1/6W
RP48	24366102	Res, Carbon	1kΩ	J 1/6W
RP49	24366224	Res, Carbon	220kΩ	J 1/6W
RP60	24366102	Res, Carbon	1kΩ	J 1/6W
RP63	24366752	Res, Carbon	7. 5kΩ	J 1/6W
RP64	24366332	Res, Carbon	3. 3kΩ	J 1/6W
RP65	24366103	Res, Carbon	10kΩ	J 1/6W
RP66	24366102	Res, Carbon	1kΩ	J 1/6W
RP67	24366103	Res, Carbon	10kΩ	J 1/6W
RP68	24366103	Res, Carbon	10kΩ	J 1/6W
RP69	24366103	Res, Carbon	10kΩ	J 1/6W
RP70	24366102	Res, Carbon	1kΩ	J 1/6W
RP71	24366202	Res, Carbon	2kΩ	J 1/6W
RP72	24366431	Res, Carbon	430Ω	J 1/6W
RP73	24366431	Res, Carbon	430Ω	J 1/6W
RP74	24366431	Res, Carbon	430Ω	J 1/6W
RP75	24366823	Res, Carbon	82kΩ	J 1/6W
RP76	24366823	Res, Carbon	82kΩ	J 1/6W
RP77	24366823	Res, Carbon	82kΩ	J 1/6W
RP78	24366752	Res, Carbon	7. 5kΩ	J 1/6W
RP79	24366202	Res, Carbon	2kΩ	J 1/6W
RP80	24366101	Res, Carbon	100Ω	J 1/6W
RP81	24366203	Res, Carbon	20kΩ	J 1/6W
RP82	24366123	Res, Carbon	12kΩ	J 1/6W
RP83	24366123	Res, Carbon	12kΩ	J 1/6W
RP84	24366123	Res, Carbon	12kΩ	J 1/6W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
RP85	24366153	Res, Carbon	15kΩ	J 1/6W
RP86	24366103	Res, Carbon	10kΩ	J 1/6W
RP87	24366152	Res, Carbon	1.5kΩ	J 1/6W
RP88	24366152	Res, Carbon	1.5kΩ	J 1/6W
RP89	24366152	Res, Carbon	1.5kΩ	J 1/6W
RP90	24366102	Res, Carbon	1kΩ	J 1/6W
RP91	24366472	Res, Carbon	4.7kΩ	J 1/6W
RP92	24366472	Res, Carbon	4.7kΩ	J 1/6W
RP93	24366472	Res, Carbon	4.7kΩ	J 1/6W
RP94	24366103	Res, Carbon	10kΩ	J 1/6W
RP95	24366103	Res, Carbon	10kΩ	J 1/6W
RP96	24366103	Res, Carbon	10kΩ	J 1/6W
RP97	24366472	Res, Carbon	4.7kΩ	J 1/6W
RP98	24366472	Res, Carbon	4.7kΩ	J 1/6W
RP99	24366472	Res, Carbon	4.7kΩ	J 1/6W
RT18	24366301	Res, Carbon	300Ω	J 1/6W
RT19	24366132	Res, Carbon	1.3kΩ	J 1/6W
RT20	24366132	Res, Carbon	1.3kΩ	J 1/6W
RT40	24366102	Res, Carbon	1kΩ	J 1/6W
RT41	24366472	Res, Carbon	4.7kΩ	J 1/6W
RV121	24366750	Res, Carbon	75Ω	J 1/6W
RV122	24366750	Res, Carbon	75Ω	J 1/6W
RV123	24366750	Res, Carbon	75Ω	J 1/6W
RV124	24366822	Res, Carbon	8.2kΩ	J 1/6W
RV125	24366822	Res, Carbon	8.2kΩ	J 1/6W
RV126	24366103	Res, Carbon	10kΩ	J 1/6W
RV127	24366302	Res, Carbon	3kΩ	J 1/6W
RV128	24366302	Res, Carbon	3kΩ	J 1/6W
RV129	24366302	Res, Carbon	3kΩ	J 1/6W
RV130	24366331	Res, Carbon	330Ω	J 1/6W
RV131	24366331	Res, Carbon	330Ω	J 1/6W
RV132	24366331	Res, Carbon	330Ω	J 1/6W
RV133	24366221	Res, Carbon	220Ω	J 1/6W
RV134	24366221	Res, Carbon	220Ω	J 1/6W
RV135	24366221	Res, Carbon	220Ω	J 1/6W
RV136	24366431	Res, Carbon	430Ω	J 1/6W
RV137	24366431	Res, Carbon	430Ω	J 1/6W
RV138	24366431	Res, Carbon	430Ω	J 1/6W
RV139	24366221	Res, Carbon	220Ω	J 1/6W
RV140	24366221	Res, Carbon	220Ω	J 1/6W
RV141	24366221	Res, Carbon	220Ω	J 1/6W
RV142	24366102	Res, Carbon	1kΩ	J 1/6W
RV143	24366102	Res, Carbon	1kΩ	J 1/6W
RV144	24366102	Res, Carbon	1kΩ	J 1/6W
RV145	24366822	Res, Carbon	8.2kΩ	J 1/6W
RV146	24366822	Res, Carbon	8.2kΩ	J 1/6W
RV147	24366822	Res, Carbon	8.2kΩ	J 1/6W
RV148	24366202	Res, Carbon	2kΩ	J 1/6W
RV149	24366202	Res, Carbon	2kΩ	J 1/6W
RV150	24366202	Res, Carbon	2kΩ	J 1/6W
RV151	24366821	Res, Carbon	820Ω	J 1/6W
RV152	24366821	Res, Carbon	820Ω	J 1/6W
RV153	24366821	Res, Carbon	820Ω	J 1/6W
RV160	24366750	Res, Carbon	75Ω	J 1/6W
RV161	24366750	Res, Carbon	75Ω	J 1/6W
RV162	24366750	Res, Carbon	75Ω	J 1/6W
RV164	24366563	Res, Carbon	56kΩ	J 1/6W
RV165	24366563	Res, Carbon	56kΩ	J 1/6W
RV166	24366563	Res, Carbon	56kΩ	J 1/6W
RV167	24366153	Res, Carbon	15kΩ	J 1/6W
RV168	24366153	Res, Carbon	15kΩ	J 1/6W
RV169	24366153	Res, Carbon	15kΩ	J 1/6W
RV170	24366331	Res, Carbon	330Ω	J 1/6W
RV171	24366331	Res, Carbon	330Ω	J 1/6W
RV172	24366331	Res, Carbon	330Ω	J 1/6W
RV173	24366122	Res, Carbon	1.2kΩ	J 1/6W
RV174	24366122	Res, Carbon	1.2kΩ	J 1/6W
RV175	24366122	Res, Carbon	1.2kΩ	J 1/6W
RV176	24366750	Res, Carbon	75Ω	J 1/6W
RV178	24366273	Res, Carbon	27kΩ	J 1/6W
RV180	24366203	Res, Carbon	20kΩ	J 1/6W
RV182	24366122	Res, Carbon	1.2kΩ	J 1/6W
RV184	24366102	Res, Carbon	1kΩ	J 1/6W
RV185	24366102	Res, Carbon	1kΩ	J 1/6W
RV187	24366102	Res, Carbon	1kΩ	J 1/6W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
RV188	24366102	Res, Carbon	1kΩ	J 1/6W
RV189	24366223	Res, Carbon	22kΩ	J 1/6W
RV190	24366223	Res, Carbon	22kΩ	J 1/6W
RV191	24366103	Res, Carbon	10kΩ	J 1/6W
RV192	24366471	Res, Carbon	470Ω	J 1/6W
RV193	24366271	Res, Carbon	270Ω	J 1/6W
RV194	24366101	Res, Carbon	100Ω	J 1/6W
RV195	24366331	Res, Carbon	330Ω	J 1/6W
RV196	24366331	Res, Carbon	330Ω	J 1/6W
RV197	24366471	Res, Carbon	470Ω	J 1/6W
RV198	24366471	Res, Carbon	470Ω	J 1/6W
RV199	24366104	Res, Carbon	100kΩ	J 1/6W
RV200	24366563	Res, Carbon	56kΩ	J 1/6W
RV201	24366683	Res, Carbon	68kΩ	J 1/6W
RV202	24366683	Res, Carbon	68kΩ	J 1/6W
RV203	24366222	Res, Carbon	2.2kΩ	J 1/6W
RV204	24366222	Res, Carbon	2.2kΩ	J 1/6W
RV205	24366222	Res, Carbon	2.2kΩ	J 1/6W
RV206	24000242	Res, Metal	18kΩ	F 1/4W
RV207	24366331	Res, Carbon	330Ω	J 1/6W
		- MISCELLANEOUS -		
H006	23148197	D Comb Module	SBX1792	
PA11	23902751	Socket	8P	
PJ51	23902751	Socket	8P	
PJ52	23902751	Socket	8P	
PL01B	23902650	Socket	13P	
PT01B	23902213	Socket	10P	
PV70	70165278	Connector	BNC	
PV72	70165278	Connector	BNC	
PV75	23368117	Connector	15P	
SA80	23344325	Push Switch	2C2P	
SV01	23344082	Switch, Slide		
SV02	23344082	Switch, Slide		
W201	23250875	Coil, Delay	TRF2080	
X001	23107519	Filter	TCF1066	
X002	23107787	Filter, TCF1044		
X4401	23153721	Ceramic Resonator	TCR1023	
X502	23153979	Crystal, 4.43MHz		
X503	23153961	Crystal, 3.58MHz		
XA02	23153845	Oscillater	4.0MHz	
ZA05	24000762	Res, Block	10kΩ	J 1/8W
■U005	23704023	PC Board Assy	Cont/Conv	
		- INTEGRATED CIRCUITS -		
⚠Q701	23904231	IC	STK392-020	
⚠Q702	23904231	IC	STK392-020	
QA01	23904597	IC	M38002SSP	
QA02	23905724	IC	256B15F1	
QA03	23318299	IC	L78MR05	
QA04	23319935	IC	MM1096BS	
QA05	23318452	IC	M6M80041P	
QA06	23318452	IC	M6M80041P	
QA10	B0488352	IC	TC74HC590AP	
QA11	B0485746	IC	TC74HC165AP	
QA12	B0488352	IC	TC74HC590AP	
QA13	B0485746	IC	TC74HC165AP	
QA14	B0485746	IC	TC74HC165AP	
QA15	B0485746	IC	TC74HC165AP	
QA20	B0485895	IC	TC74HC14AP	
QA22	B0486124	IC	TC74HC125AP	
QA23	B0486124	IC	TC74HC125AP	
QA24	23904598	IC	MAX232CPE	
QA25	23904598	IC	MAX232CPE	
QA26	B0485895	IC	TC74HC14AP	
QH10	23319817	IC	DAC8840FP	
QH11	B0350500	IC	TA75558P	
QH17	B0350500	IC	TA75558P	
QH21	B0350500	IC	TA75558P	
QH24	23319817	IC	DAC8840FP	
QH30	70119743	IC	PST523D	
QH31	23319934	IC	UPD6453CY514	
QJ01	23904164	IC	LM2991T	
QJ02	23319941	IC	SI-3050C	
		- TRANSISTORS -		
QA21	A6734590	Transistor	2SC752(G)	

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
QH01	A6734590	Transistor	2SC752(G)	
QH02	A6534053	Transistor	2SA1015-Y	
QH03	A6533730	Transistor	2SA1012	
QH04	A6317440	Transistor	2SC1815-Y	
QH05	A6534053	Transistor	2SA1015-Y	
QH06	A6317440	Transistor	2SC1815-Y	
QH07	A6534053	Transistor	2SA1015-Y	
QH08	A6061300	Transistor	2SK525	
QH12	A6000030	Transistor	RN1003	
QH13	A6734590	Transistor	2SC752(G)	
QH20	A6048350	Transistor, FET	2SK30ATM	
QH34	A6317440	Transistor	2SC1815-Y	
QH35	A6534053	Transistor	2SA1015-Y	
QH36	A6317440	Transistor	2SC1815-Y	
QH37	A6317440	Transistor	2SC1815-Y	
		- DIODES -		
DA01	23316312	Diode, Zener	UZ6.2BSB	
DA02	23316312	Diode, Zener	UZ6.2BSB	
DA03	23316312	Diode, Zener	UZ6.2BSB	
DA04	23316312	Diode, Zener	UZ6.2BSB	
DA10	23316312	Diode, Zener	UZ6.2BSB	
DA11	23316312	Diode, Zener	UZ6.2BSB	
DA12	23316312	Diode, Zener	UZ6.2BSB	
DA13	23316312	Diode, Zener	UZ6.2BSB	
DA14	23316312	Diode, Zener	UZ6.2BSB	
DA15	23316312	Diode, Zener	UZ6.2BSB	
DA16	23316312	Diode, Zener	UZ6.2BSB	
DA17	23316312	Diode, Zener	UZ6.2BSB	
DA18	23316312	Diode, Zener	UZ6.2BSB	
DA20	23316283	Diode, Zener	UZ2.0BSB	
DA21	23316302	Diode, Zener	UZ4.7BSB	
DA22	23316312	Diode, Zener	UZ6.2BSB	
DA23	23316312	Diode, Zener	UZ6.2BSB	
DA24	23316345	Diode, Zener	UZ18BSB	
DA25	23316345	Diode, Zener	UZ18BSB	
DA26	23316345	Diode, Zener	UZ18BSB	
DA27	23316345	Diode, Zener	UZ18BSB	
DA28	23316345	Diode, Zener	UZ18BSB	
DA29	23316345	Diode, Zener	UZ18BSB	
DA32	23316312	Diode, Zener	UZ6.2BSB	
DA33	23316345	Diode, Zener	UZ18BSB	
DA34	23316345	Diode, Zener	UZ18BSB	
DA35	23316302	Diode, Zener	UZ4.7BSB	
DA36	23316345	Diode, Zener	UZ18BSB	
DA37	23316345	Diode, Zener	UZ18BSB	
DA38	23316345	Diode, Zener	UZ18BSB	
DA39	23316345	Diode, Zener	UZ18BSB	
DA40	23316345	Diode, Zener	UZ18BSB	
DA41	23316345	Diode, Zener	UZ18BSB	
DH01	23316333	Diode, Zener	UZ12BSB	
DH02	A7150258	Diode	1SS176FA	
DH03	A7150258	Diode	1SS176FA	
DH04	A7150258	Diode	1SS176FA	
DH05	A7150258	Diode	1SS176FA	
DH06	23316402	Diode	RL4Z	
DH08	23118060	Diode	AL01Z	
DH10	A7150258	Diode	1SS176FA	
		- COILS -		
LA01	23237986	Coil, Peaking	TRF4120AC	
LA02	23237986	Coil, Peaking	TRF4120AC	
LH01	23262261	Coil, IF	TRF1177D	
LH02	23238714	Coil, Peaking	TRF4100AJ	
		- CAPACITORS -		
C702	24436220	Cap, Ceramic	22pF	J 50V
C703	24436681	Cap, Ceramic	680pF	J 50V
C704	24669101	Cap, Electrolytic	100μF	M 50V
C705	24669101	Cap, Electrolytic	100μF	M 50V
C707	24436220	Cap, Ceramic	22pF	J 50V
C708	24436681	Cap, Ceramic	680pF	J 50V
C709	24669101	Cap, Electrolytic	100μF	M 50V
C710	24669101	Cap, Electrolytic	100μF	M 50V
C712	24436220	Cap, Ceramic	22pF	J 50V
C713	24436681	Cap, Ceramic	680pF	J 50V
C715	24436220	Cap, Ceramic	22pF	J 50V
C716	24436681	Cap, Ceramic	680pF	J 50V
C717	24669101	Cap, Electrolytic	100μF	M 50V
C718	24669101	Cap, Electrolytic	100μF	M 50V
C720	24436220	Cap, Ceramic	22pF	J 50V
C721	24436681	Cap, Ceramic	680pF	J 50V
C722	24669101	Cap, Electrolytic	100μF	M 50V
C723	24669101	Cap, Electrolytic	100μF	M 50V
C725	24436220	Cap, Ceramic	22pF	J 50V
C726	24436681	Cap, Ceramic	680pF	J 50V
C769	24669101	Cap, Electrolytic	100μF	M 50V
C770	24668471	Cap, Electrolytic	470μF	M 35V
C771	24669101	Cap, Electrolytic	100μF	M 50V
CA01	24232103	Cap, Ceramic	0.01μF	Z 50V
CA02	24665221	Cap, Electrolytic	220μF	M 10V
CA03	24436330	Cap, Ceramic	33pF	J 50V
CA04	24436330	Cap, Ceramic	33pF	J 50V
CA05	24436101	Cap, Ceramic	100pF	J 50V
CA06	24232103	Cap, Ceramic	0.01μF	Z 50V
CA07	24665221	Cap, Electrolytic	220μF	M 10V
CA08	24667221	Cap, Electrolytic	220μF	M 25V
CA09	24232103	Cap, Ceramic	0.01μF	Z 50V
CA10	24232103	Cap, Ceramic	0.01μF	Z 50V
CA11	24232103	Cap, Ceramic	0.01μF	Z 50V
CA12	24665221	Cap, Electrolytic	220μF	M 10V
CA13	24669478	Cap, Electrolytic	0.47μF	M 50V
CA14	24232103	Cap, Ceramic	0.01μF	Z 50V
CA15	24232103	Cap, Ceramic	0.01μF	Z 50V
CA16	24665221	Cap, Electrolytic	220μF	M 10V
CA17	24232103	Cap, Ceramic	0.01μF	Z 50V
CA20	24232103	Cap, Ceramic	0.01μF	Z 50V
CA21	24232103	Cap, Ceramic	0.01μF	Z 50V
CA22	24232103	Cap, Ceramic	0.01μF	Z 50V
CA23	24232103	Cap, Ceramic	0.01μF	Z 50V
CA24	24232103	Cap, Ceramic	0.01μF	Z 50V
CA25	24232103	Cap, Ceramic	0.01μF	Z 50V
CA30	24232103	Cap, Ceramic	0.01μF	Z 50V
CA31	24538223	Cap, Plastic	0.022μF	J 50V
CA32	24232103	Cap, Ceramic	0.01μF	Z 50V
CA33	24232103	Cap, Ceramic	0.01μF	Z 50V
CA34	24232103	Cap, Ceramic	0.01μF	Z 50V
CA35	24232103	Cap, Ceramic	0.01μF	Z 50V
CA36	24669010	Cap, Electrolytic	1μF	M 50V
CA37	24669010	Cap, Electrolytic	1μF	M 50V
CA38	24669010	Cap, Electrolytic	1μF	M 50V
CA39	24669010	Cap, Electrolytic	1μF	M 50V
CA40	24669010	Cap, Electrolytic	1μF	M 50V
CA41	24232103	Cap, Ceramic	0.01μF	Z 50V
CA42	24669010	Cap, Electrolytic	1μF	M 50V
CA43	24669010	Cap, Electrolytic	1μF	M 50V
CA44	24669010	Cap, Electrolytic	1μF	M 50V
CA45	24232103	Cap, Ceramic	0.01μF	Z 50V
CA46	24590223	Cap, Plastic	0.022μF	J 50V
CH01	24669101	Cap, Electrolytic	100μF	M 50V
CH02	24436471	Cap, Ceramic	470pF	J 50V
CH03	24232103	Cap, Ceramic	0.01μF	Z 50V
CH04	24436101	Cap, Ceramic	100pF	J 50V
CH05	24667101	Cap, Electrolytic	100μF	M 25V
CH06	24591104	Cap, Plastic	0.1μF	J 50V
CH07	24669101	Cap, Electrolytic	100μF	M 50V
CH08	24667101	Cap, Electrolytic	100μF	M 25V
CH10	24232103	Cap, Ceramic	0.01μF	Z 50V
CH11	24232103	Cap, Ceramic	0.01μF	Z 50V
CH12	24232103	Cap, Ceramic	0.01μF	Z 50V
CH13	24232103	Cap, Ceramic	0.01μF	Z 50V
CH15	24436221	Cap, Ceramic	220pF	J 50V
CH16	24232103	Cap, Ceramic	0.01μF	Z 50V
CH17	24232103	Cap, Ceramic	0.01μF	Z 50V
CH18	24232103	Cap, Ceramic	0.01μF	Z 50V
CH19	24232103	Cap, Ceramic	0.01μF	Z 50V
CH20	24232103	Cap, Ceramic	0.01μF	Z 50V
CH21	24232103	Cap, Ceramic	0.01μF	Z 50V
CH22	24232103	Cap, Ceramic	0.01μF	Z 50V
CH30	24591104	Cap, Plastic	0.1μF	J 50V
CH31	24666100	Cap, Electrolytic	10μF	M 16V
CH32	24436101	Cap, Ceramic	100pF	J 50V
CH33	24436101	Cap, Ceramic	100pF	J 50V

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
CH34	24436101	Cap,Ceramic	100pF	J 50V
CH35	24436101	Cap,Ceramic	100pF	J 50V
CH36	24666100	Cap,Electrolytic	10μF	M 16V
CH37	24232103	Cap,Ceramic	0.01μF	Z 50V
CH40	24232103	Cap,Ceramic	0.01μF	Z 50V
CH42	24232222	Cap,Ceramic	2200pF	Z 50V
CH43	24232222	Cap,Ceramic	2200pF	Z 50V
CH44	24232222	Cap,Ceramic	2200pF	Z 50V
CH45	24232222	Cap,Ceramic	2200pF	Z 50V
CH46	24232222	Cap,Ceramic	2200pF	Z 50V
CH47	24232222	Cap,Ceramic	2200pF	Z 50V
CH51	24232103	Cap,Ceramic	0.01μF	Z 50V
CH52	24232103	Cap,Ceramic	0.01μF	Z 50V
CH54	24232103	Cap,Ceramic	0.01μF	Z 50V
CJ01	24667101	Cap,Electrolytic	100μF	M 25V
CJ02	24538334	Cap,Plastic	0.33μF	J 50V
CJ03	24538334	Cap,Plastic	0.33μF	J 50V
CJ04	24666470	Cap,Electrolytic	47μF	M 16V
CJ05	24667101	Cap,Electrolytic	100μF	M 25V
CJ06	24538334	Cap,Plastic	0.33μF	J 50V
CJ07	24538334	Cap,Plastic	0.33μF	J 50V
CJ08	24666470	Cap,Electrolytic	47μF	M 16V
		- RESISTORS -		
R707	24367472	Res,Carbon	4.7kΩ	G 1/6W
R708	24366472	Res,Carbon	4.7kΩ	J 1/6W
R709	24366561	Res,Carbon	560Ω	J 1/6W
⚠R710	24531100	Res,Fusible	10Ω	J 1/2W
⚠R711	24531100	Res,Fusible	10Ω	J 1/2W
R712	24555331	Res,Oxide Metal	330Ω	J 3W
⚠R713	24546139	Res,Fusible	1.3Ω	J 1/2W
R714	24367472	Res,Carbon	4.7kΩ	G 1/6W
R715	24366472	Res,Carbon	4.7kΩ	J 1/6W
R716	24366561	Res,Carbon	560Ω	J 1/6W
⚠R717	24531100	Res,Fusible	10Ω	J 1/2W
⚠R718	24531100	Res,Fusible	10Ω	J 1/2W
R719	24555331	Res,Oxide Metal	330Ω	J 3W
⚠R720	24546209	Res,Fusible	2.0Ω	J 1/2W
R721	24367472	Res,Carbon	4.7kΩ	G 1/6W
R722	24366472	Res,Carbon	4.7kΩ	J 1/6W
R723	24366561	Res,Carbon	560Ω	J 1/6W
R724	24555331	Res,Oxide Metal	330Ω	J 3W
⚠R725	24546209	Res,Fusible	2.0Ω	J 1/2W
R726	24367472	Res,Carbon	4.7kΩ	G 1/6W
R727	24366472	Res,Carbon	4.7kΩ	J 1/6W
R728	24366561	Res,Carbon	560Ω	J 1/6W
⚠R729	24531100	Res,Fusible	10Ω	J 1/2W
⚠R730	24531100	Res,Fusible	10Ω	J 1/2W
R731	24555331	Res,Oxide Metal	330Ω	J 3W
⚠R732	24546209	Res,Fusible	2.0Ω	J 1/2W
R733	24367472	Res,Carbon	4.7kΩ	G 1/6W
R734	24366472	Res,Carbon	4.7kΩ	J 1/6W
R735	24366561	Res,Carbon	560Ω	J 1/6W
⚠R736	24531100	Res,Fusible	10Ω	J 1/2W
⚠R737	24531100	Res,Fusible	10Ω	J 1/2W
R738	24555331	Res,Oxide Metal	330Ω	J 3W
⚠R739	24546139	Res,Fusible	1.3Ω	J 1/2W
R740	24367472	Res,Carbon	4.7kΩ	G 1/6W
R741	24366472	Res,Carbon	4.7kΩ	J 1/6W
R742	24366561	Res,Carbon	560Ω	J 1/6W
R743	24555331	Res,Oxide Metal	330Ω	J 3W
⚠R744	24546209	Res,Fusible	2.0Ω	J 1/2W
RA01	24366102	Res,Carbon	1kΩ	J 1/6W
RA02	24366102	Res,Carbon	1kΩ	J 1/6W
RA03	24366102	Res,Carbon	1kΩ	J 1/6W
RA04	24366102	Res,Carbon	1kΩ	J 1/6W
RA05	24366102	Res,Carbon	1kΩ	J 1/6W
RA06	24366102	Res,Carbon	1kΩ	J 1/6W
RA07	24366101	Res,Carbon	100Ω	J 1/6W
RA08	24366101	Res,Carbon	100Ω	J 1/6W
RA09	24366102	Res,Carbon	1kΩ	J 1/6W
RA10	24366102	Res,Carbon	1kΩ	J 1/6W
RA11	24366102	Res,Carbon	1kΩ	J 1/6W
RA12	24366102	Res,Carbon	1kΩ	J 1/6W
RA13	24366102	Res,Carbon	1kΩ	J 1/6W
RA14	24366102	Res,Carbon	1kΩ	J 1/6W
RA15	24366102	Res,Carbon	1kΩ	J 1/6W
RA16	24366102	Res,Carbon	1kΩ	J 1/6W
RA17	24366102	Res,Carbon	1kΩ	J 1/6W
RA18	24366102	Res,Carbon	1kΩ	J 1/6W
RA19	24366102	Res,Carbon	1kΩ	J 1/6W
RA20	24366102	Res,Carbon	1kΩ	J 1/6W
RA21	24366102	Res,Carbon	1kΩ	J 1/6W
RA22	24366102	Res,Carbon	1kΩ	J 1/6W
RA23	24366102	Res,Carbon	1kΩ	J 1/6W
RA24	24366102	Res,Carbon	1kΩ	J 1/6W
RA25	24366102	Res,Carbon	1kΩ	J 1/6W
RA26	24366472	Res,Carbon	4.7kΩ	J 1/6W
RA27	24366102	Res,Carbon	1kΩ	J 1/6W
RA28	24366221	Res,Carbon	220Ω	J 1/6W
RA29	24366222	Res,Carbon	2.2kΩ	J 1/6W
RA30	24366102	Res,Carbon	1kΩ	J 1/6W
RA31	24366102	Res,Carbon	1kΩ	J 1/6W
RA32	24366102	Res,Carbon	1kΩ	J 1/6W
RA33	24366102	Res,Carbon	1kΩ	J 1/6W
RA34	24366102	Res,Carbon	1kΩ	J 1/6W
RA35	24366102	Res,Carbon	1kΩ	J 1/6W
RA36	24366102	Res,Carbon	1kΩ	J 1/6W
RA37	24366102	Res,Carbon	1kΩ	J 1/6W
RA40	24366103	Res,Carbon	10kΩ	J 1/6W
RA41	24366101	Res,Carbon	100Ω	J 1/6W
RA42	24366302	Res,Carbon	3kΩ	J 1/6W
RA43	24366822	Res,Carbon	8.2kΩ	J 1/6W
RA44	24366103	Res,Carbon	10kΩ	J 1/6W
RA45	24366102	Res,Carbon	1kΩ	J 1/6W
RA46	24366620	Res,Carbon	62Ω	J 1/6W
RA47	24366622	Res,Carbon	6.2kΩ	J 1/6W
RA48	24366622	Res,Carbon	6.2kΩ	J 1/6W
RA49	24366622	Res,Carbon	6.2kΩ	J 1/6W
RA51	24366623	Res,Carbon	62kΩ	J 1/6W
RA52	24366622	Res,Carbon	6.2kΩ	J 1/6W
RA53	24366101	Res,Carbon	100Ω	J 1/6W
RA54	24366470	Res,Carbon	47Ω	J 1/6W
RA56	24366470	Res,Carbon	47Ω	J 1/6W
RA57	24366222	Res,Carbon	2.2kΩ	J 1/6W
RA58	24366101	Res,Carbon	100Ω	J 1/6W
RA59	24366471	Res,Carbon	470Ω	J 1/6W
RA60	24366103	Res,Carbon	10kΩ	J 1/6W
RA61	24366470	Res,Carbon	47Ω	J 1/6W
RA62	24366101	Res,Carbon	100Ω	J 1/6W
RA63	24366470	Res,Carbon	47Ω	J 1/6W
RA64	24366622	Res,Carbon	6.2kΩ	J 1/6W
RA70	24366103	Res,Carbon	10kΩ	J 1/6W
RA71	24366103	Res,Carbon	10kΩ	J 1/6W
RA72	24366103	Res,Carbon	10kΩ	J 1/6W
RA80	24366103	Res,Carbon	10kΩ	J 1/6W
RA81	24366103	Res,Carbon	10kΩ	J 1/6W
RH01	24366472	Res,Carbon	4.7kΩ	J 1/6W
RH02	24366222	Res,Carbon	2.2kΩ	J 1/6W
RH03	24366222	Res,Carbon	2.2kΩ	J 1/6W
RH04	24366471	Res,Carbon	470Ω	J 1/6W
RH06	24366222	Res,Carbon	2.2kΩ	J 1/6W
RH07	24366103	Res,Carbon	10kΩ	J 1/6W
RH08	24366472	Res,Carbon	4.7kΩ	J 1/6W
RH09	24366103	Res,Carbon	10kΩ	J 1/6W
RH10	24366471	Res,Carbon	470Ω	J 1/6W
RH100	24366102	Res,Carbon	1kΩ	J 1/6W
RH101	24366103	Res,Carbon	10kΩ	J 1/6W
RH102	24366102	Res,Carbon	1kΩ	J 1/6W
RH103	24366472	Res,Carbon	4.7kΩ	J 1/6W
RH104	24366472	Res,Carbon	4.7kΩ	J 1/6W
RH105	24366103	Res,Carbon	10kΩ	J 1/6W
RH106	24366103	Res,Carbon	10kΩ	J 1/6W
RH107	24366472	Res,Carbon	4.7kΩ	J 1/6W
RH108	24366104	Res,Carbon	100kΩ	J 1/6W
RH109	24366682	Res,Carbon	6.8kΩ	J 1/6W
RH11	24381182	Res,Oxide Metal	1.8kΩ	J 1/2W
RH110	24366222	Res,Carbon	2.2kΩ	J 1/6W
RH111	24366122	Res,Carbon	1.2kΩ	J 1/6W
RH112	24366472	Res,Carbon	4.7kΩ	J 1/6W
RH113	24546109	Res,Fusible	1.0Ω	J 1/2W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
RH12	24381681	Res, Oxide Metal	680Ω	J 1/2W
RH13	24366471	Res, Carbon	470Ω	J 1/6W
RH19	24366103	Res, Carbon	10kΩ	J 1/6W
RH20	24366471	Res, Carbon	470Ω	J 1/6W
RH21	24366471	Res, Carbon	470Ω	J 1/6W
RH22	24366471	Res, Carbon	470Ω	J 1/6W
RH23	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH24	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH25	24366153	Res, Carbon	15kΩ	J 1/6W
RH26	24366101	Res, Carbon	100Ω	J 1/6W
RH27	24366153	Res, Carbon	15kΩ	J 1/6W
RH28	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH29	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH30	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH31	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH32	24366101	Res, Carbon	100Ω	J 1/6W
RH33	24366101	Res, Carbon	100Ω	J 1/6W
RH40	24366473	Res, Carbon	47kΩ	J 1/6W
RH41	24366473	Res, Carbon	47kΩ	J 1/6W
RH43	24366222	Res, Carbon	2.2kΩ	J 1/6W
RH44	24366223	Res, Carbon	22kΩ	J 1/6W
RH45	24366103	Res, Carbon	10kΩ	J 1/6W
RH48	24366222	Res, Carbon	2.2kΩ	J 1/6W
RH49	24366222	Res, Carbon	2.2kΩ	J 1/6W
RH50	24366222	Res, Carbon	2.2kΩ	J 1/6W
RH51	24366222	Res, Carbon	2.2kΩ	J 1/6W
RH52	24366222	Res, Carbon	2.2kΩ	J 1/6W
RH53	24366101	Res, Carbon	100Ω	J 1/6W
RH54	24366105	Res, Carbon	1MΩ	J 1/6W
RH58	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH59	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH60	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH61	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH62	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH63	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH64	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH70	24366102	Res, Carbon	1kΩ	J 1/6W
RH71	24366101	Res, Carbon	100Ω	J 1/6W
RH72	24366101	Res, Carbon	100Ω	J 1/6W
RH73	24366101	Res, Carbon	100Ω	J 1/6W
RH74	24366101	Res, Carbon	100Ω	J 1/6W
RH75	24366330	Res, Carbon	33Ω	J 1/6W
RH76	24366330	Res, Carbon	33Ω	J 1/6W
RH77	24366330	Res, Carbon	33Ω	J 1/6W
RH78	24366330	Res, Carbon	33Ω	J 1/6W
RH85	24367103	Res, Carbon	10kΩ	G 1/6W
RH86	24367562	Res, Carbon	5.6kΩ	G 1/6W
RH87	24367331	Res, Carbon	330Ω	G 1/6W
RH88	24367103	Res, Carbon	10kΩ	G 1/6W
RH93	24366472	Res, Carbon	4.7kΩ	J 1/6W
RH94	24366103	Res, Carbon	10kΩ	J 1/6W
RH95	24366102	Res, Carbon	1kΩ	J 1/6W
RH96	24366132	Res, Carbon	1.3kΩ	J 1/6W
RH99	24366471	Res, Carbon	470Ω	J 1/6W
		- MISCELLANEOUS -		
P702	23164787	Plug	7P	
P704	23164788	Plug	8P	
PA02	23368519	Plug	8P	
PH04	23368519	Plug	8P	
PH06	23368519	Plug	8P	
PS01	23365653	Earphone Jack		
PS02	23902866	Socket, 25P		
PS03	23365792	Jack	5P	
PS04	23365792	Jack	5P	
Q701D	23037312	Screw	3x12mm	
Q701E	23037312	Screw	3x12mm	
Q702D	23037312	Screw	3x12mm	
QA02A	23116344	Socket, 28P		
QJ01B	23035308	Screw, 3x8mm		
SA01	23344368	Cord Switch		
SA02	23344082	Switch, Slide		
SA03	23344082	Switch, Slide		
SA04	23344100	Switch, Slide	2C3P	
SA05	23344100	Switch, Slide	2C3P	
XA01	23153752	Crystal		

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
ZA01	24094635	Cap, Block	100pF	M 50V
ZA02	24094635	Cap, Block	100pF	M 50V
ZA03	24094635	Cap, Block	100pF	M 50V
ZA04	24000762	Res, Block	10kΩ	J 1/8W
■U0061	23706177	P C Board Assy	CRT Drive (R)	
		- TRANSISTORS -		
⚠Q902	A6363200	Transistor	2SC3619	
Q908	A6734590	Transistor	2SC752 (G)	
Q922	A6360252	Transistor	2SC3334 (C)	
Q925	A6547303	Transistor	2SA1321 (C)	
Q928	A6317440	Transistor	2SC1815-Y	
Q931	A6734590	Transistor	2SC752 (G)	
		- DIODES -		
D904	A7150258	Diode	1SS176FA	
D907	A7150258	Diode	1SS176FA	
D912	A7150258	Diode	1SS176FA	
D921	23118859	Diode	1SS133	
D922	23118859	Diode	1SS133	
D923	23118859	Diode	1SS133	
D924	23118859	Diode	1SS133	
		- COILS -		
L901	23237987	Coil, Peaking	TRF4100AC	
L904	23237991	Coil, Peaking	TRF4479AC	
		- CAPACITORS -		
C902	24211102	Cap, Ceramic	1000pF	K 2kV
C905	24591104	Cap, Plastic	0.1μF	J 50V
C911	24436391	Cap, Ceramic	390pF	J 50V
C920	24679330	Cap, Electrolytic	33μF	M 250V
		- RESISTORS -		
R9001	24366222	Res, Carbon	2.2kΩ	J 1/6W
R902	24366101	Res, Carbon	100Ω	J 1/6W
⚠R905	24555153	Res, Oxide Metal	15kΩ	J 3W
⚠R908	24555153	Res, Oxide Metal	15kΩ	J 3W
R917	24366151	Res, Carbon	150Ω	J 1/6W
R922	24942102	Res, Composition	1kΩ	J 1/2W
R936	24366151	Res, Carbon	150Ω	J 1/6W
R948	24552391	Res, Oxide Metal	390Ω	J 1/2W
R951	24366272	Res, Carbon	2.7kΩ	J 1/6W
R954	24366102	Res, Carbon	1kΩ	J 1/6W
R958	24327131	Res, Metal	130Ω	F 1/4W
R960	24366120	Res, Carbon	12Ω	J 1/6W
⚠R971	24555153	Res, Oxide Metal	15kΩ	J 3W
⚠R982	24552102	Res, Oxide Metal	1kΩ	J 1/2W
R985	24366393	Res, Carbon	39kΩ	J 1/6W
R988	24366472	Res, Carbon	4.7kΩ	J 1/6W
R991	24366302	Res, Carbon	3kΩ	J 1/6W
R994	24366272	Res, Carbon	2.7kΩ	J 1/6W
R997	24366472	Res, Carbon	4.7kΩ	J 1/6W
		- MISCELLANEOUS -		
Q902C	23030211	Screw	3x14mm	
⚠V901A	23902886	Socket	9P	
■U0062	23706178	PC Board Assy	CRT Drive (G)	
		- TRANSISTORS -		
Q702	A6317440	Transistor	2SC1815-Y	
Q705	A6534053	Transistor	2SA1015-Y	
Q708	A6317440	Transistor	2SC1815-Y	
Q711	A6317440	Transistor	2SC1815-Y	
Q714	A6734590	Transistor	2SC752 (G)	
Q717	A6734590	Transistor	2SC752 (G)	
Q720	A6317440	Transistor	2SC1815-Y	
Q723	A6534053	Transistor	2SA1015-Y	
⚠Q726	23314701	Transistor	2SB1186A	
⚠Q729	A6359135	Transistor	2SC3298A-Y	
⚠Q903	A6363200	Transistor	2SC3619	
Q907	A6509154	Transistor	2SA562TM-Y	
Q909	A6734590	Transistor	2SC752 (G)	
Q911	A6321265	Transistor	2SC2120-Y	
Q923	A6360252	Transistor	2SC3334 (C)	
Q926	A6547303	Transistor	2SA1321 (C)	
Q929	A6317440	Transistor	2SC1815-Y	
Q932	A6734590	Transistor	2SC752 (G)	
		- DIODES -		
D702	A7150258	Diode	1SS176FA	

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
D705	A7150258	Diode	1SS176FA	
D708	A7150258	Diode	1SS176FA	
D711	A7568475	Diode	TVR2D	
D714	A7568475	Diode	TVR2D	
D901	A7150258	Diode	1SS176FA	
D902	A7150258	Diode	1SS176FA	
D903	A7150258	Diode	1SS176FA	
D905	A7150258	Diode	1SS176FA	
D908	A7150258	Diode	1SS176FA	
D911	A7150258	Diode	1SS176FA	
D913	A7150258	Diode	1SS176FA	
D925	23118859	Diode	1SS133	
D926	23118859	Diode	1SS133	
D927	23118859	Diode	1SS133	
D928	23118859	Diode	1SS133	
		- COILS -		
L702	23103859	Coil, Choke	TEM2011	
L705	23237980	Coil, Peaking	TRF4390AC	
L708	23103859	Coil, Choke	TEM2011	
L711	23103859	Coil, Choke	TEM2011	
L714	23103859	Coil, Choke	TEM2011	
L717	23103859	Coil, Choke	TEM2011	
L720	23261974	Coil, Choke	HC5-035	
L902	23237987	Coil, Peaking	TRF4100AC	
L905	23237991	Coil, Peaking	TRF4479AC	
L908	23237987	Coil, Peaking	TRF4100AC	
		- CAPACITORS -		
C711	24666101	Cap, Electrolytic	100μF	M 16V
C714	24436820	Cap, Ceramic	82pF	J 50V
C729	24436101	Cap, Ceramic	100pF	J 50V
C732	24214472	Cap, Ceramic	4700pF	K 500V
C735	24436101	Cap, Ceramic	100pF	J 50V
C738	24214472	Cap, Ceramic	4700pF	K 500V
C741	24677100	Cap, Electrolytic	10μF	M 160V
C744	24677470	Cap, Electrolytic	47μF	M 160V
C747	24677470	Cap, Electrolytic	47μF	M 160V
C750	24436330	Cap, Ceramic	33pF	J 50V
C753	24434560	Cap, Ceramic	56pF	K 500V
C756	24677100	Cap, Electrolytic	10μF	M 160V
C903	24211102	Cap, Ceramic	1000pF	K 2kV
C906	24591104	Cap, Plastic	0. 1μF	J 50V
C910	24669478	Cap, Electrolytic	0. 47μF	M 50V
C912	24436561	Cap, Ceramic	560pF	J 50V
C914	24744100	Cap, Electrolytic	10μF	M 16V
C915	24666471	Cap, Electrolytic	470μF	M 16V
C916	24744100	Cap, Electrolytic	10μF	M 16V
C918	24679330	Cap, Electrolytic	33μF	M 250V
C930	24667470	Cap, Electrolytic	47μF	M 25V
C932	24538103	Cap, Plastic	0. 01μF	J 50V
C934	24666470	Cap, Electrolytic	47μF	M 16V
C936	24538103	Cap, Plastic	0. 01μF	J 50V
C941	24212391	Cap, Ceramic	390pF	K 50V
C943	24538103	Cap, Plastic	0. 01μF	J 50V
C945	24667470	Cap, Electrolytic	47μF	M 25V
		- RESISTORS -		
⚠R702	24531680	Res, Fusible	68Ω	J 1/2W
R705	24366222	Res, Carbon	2. 2kΩ	J 1/6W
R711	24366222	Res, Carbon	2. 2kΩ	J 1/6W
R747	24366182	Res, Carbon	1. 8kΩ	J 1/6W
R750	24366333	Res, Carbon	33kΩ	J 1/6W
R753	24552100	Res, Oxide Metal	10Ω	J 1/2W
R756	24552301	Res, Oxide Metal	300Ω	J 1/2W
R759	24366820	Res, Carbon	82Ω	J 1/6W
R762	24366820	Res, Carbon	82Ω	J 1/6W
R765	24366152	Res, Carbon	1. 5kΩ	J 1/6W
R768	24366122	Res, Carbon	1. 2kΩ	J 1/6W
R771	24366152	Res, Carbon	1. 5kΩ	J 1/6W
R774	24366122	Res, Carbon	1. 2kΩ	J 1/6W
R777	24366683	Res, Carbon	68kΩ	J 1/6W
R780	24366683	Res, Carbon	68kΩ	J 1/6W
R783	24552430	Res, Oxide Metal	43Ω	J 1/2W
R786	24552430	Res, Oxide Metal	43Ω	J 1/2W
R789	24321279	Res, Metal	2. 7Ω	J 1/2W
R792	24321279	Res, Metal	2. 7Ω	J 1/2W
R795	24554221	Res, Oxide Metal	220Ω	J 2W
R798	24366123	Res, Carbon	12kΩ	J 1/6W
R9002	24366222	Res, Carbon	2. 2kΩ	J 1/6W
R903	24366101	Res, Carbon	100Ω	J 1/6W
⚠R906	24555153	Res, Oxide Metal	15kΩ	J 3W
⚠R909	24555153	Res, Oxide Metal	15kΩ	J 3W
R911	24366562	Res, Carbon	5. 6kΩ	J 1/6W
R912	24366103	Res, Carbon	10kΩ	J 1/6W
R913	24366101	Res, Carbon	100Ω	J 1/6W
R918	24366151	Res, Carbon	150Ω	J 1/6W
R932	24366102	Res, Carbon	1kΩ	J 1/6W
⚠R933	24531120	Res, Fusible	12Ω	J 1/2W
R934	24552391	Res, Oxide Metal	390Ω	J 1/2W
R937	24366820	Res, Carbon	82Ω	J 1/6W
R949	24942102	Res, Composition	1kΩ	J 1/2W
R952	24366272	Res, Carbon	2. 7kΩ	J 1/6W
R955	24366102	Res, Carbon	1kΩ	J 1/6W
R959	24327131	Res, Metal	130Ω	F 1/4W
R961	24366120	Res, Carbon	12Ω	J 1/6W
R963	24366361	Res, Carbon	360Ω	J 1/6W
R964	24366821	Res, Carbon	820Ω	J 1/6W
⚠R974	24555153	Res, Oxide Metal	15kΩ	J 3W
R977	24366122	Res, Carbon	1. 2kΩ	J 1/6W
⚠R983	24552102	Res, Oxide Metal	1kΩ	J 1/2W
R986	24366183	Res, Carbon	18kΩ	J 1/6W
R989	24366472	Res, Carbon	4. 7kΩ	J 1/6W
R992	24366132	Res, Carbon	1. 3kΩ	J 1/6W
R995	24366272	Res, Carbon	2. 7kΩ	J 1/6W
R998	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RM51	24366153	Res, Carbon	15kΩ	J 1/6W
RM53	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RM55	24366221	Res, Carbon	220Ω	J 1/6W
RM57	24366102	Res, Carbon	1kΩ	J 1/6W
RM59	24366102	Res, Carbon	1kΩ	J 1/6W
RM61	24366203	Res, Carbon	20kΩ	J 1/6W
RM63	24366273	Res, Carbon	27kΩ	J 1/6W
RM65	24552471	Res, Oxide Metal	470Ω	J 1/2W
RM67	24366102	Res, Carbon	1kΩ	J 1/6W
RM69	24366471	Res, Carbon	470Ω	J 1/6W
RM71	24366152	Res, Carbon	1. 5kΩ	J 1/6W
RM73	24366330	Res, Carbon	33Ω	J 1/6W
		- MISCELLANEOUS -		
Q903C	23030211	Screw	3x14mm	
⚠V902A	23902886	Socket	9P	
■U0063	23706179	PC Board Assy	CRT Drive (B)	
		- TRANSISTORS -		
Q703	A6317440	Transistor	2SC1815-Y	
Q706	A6534053	Transistor	2SA1015-Y	
Q709	A6317440	Transistor	2SC1815-Y	
Q712	A6317440	Transistor	2SC1815-Y	
Q715	A6734590	Transistor	2SC752 (G)	
Q718	A6734590	Transistor	2SC752 (G)	
Q721	A6317440	Transistor	2SC1815-Y	
Q724	A6534053	Transistor	2SA1015-Y	
⚠Q727	23314701	Transistor	2SB1186A	
⚠Q730	A6359135	Transistor	2SC3298A-Y	
⚠Q904	A6363200	Transistor	2SC3619	
Q910	A6734590	Transistor	2SC752 (G)	
Q924	A6360252	Transistor	2SC3334 (C)	
Q927	A6547303	Transistor	2SA1321 (C)	
Q930	A6317440	Transistor	2SC1815-Y	
Q933	A6734590	Transistor	2SC752 (G)	
		- DIODES -		
D703	A7150258	Diode	1SS176FA	
D706	A7150258	Diode	1SS176FA	
D709	A7150258	Diode	1SS176FA	
D712	A7568475	Diode	TVR2D	
D715	A7568475	Diode	TVR2D	
D906	A7150258	Diode	1SS176FA	
D909	A7150258	Diode	1SS176FA	
D914	A7150258	Diode	1SS176FA	
D929	23118859	Diode	1SS133	
D930	23118859	Diode	1SS133	
D931	23118859	Diode	1SS133	
D932	23118859	Diode	1SS133	

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
		- COILS -		
L703	23103859	Coil, Choke	TEM2011	
L706	23237980	Coil, Peaking	TRF4390AC	
L709	23103859	Coil, Choke	TEM2011	
L712	23103859	Coil, Choke	TEM2011	
L715	23103859	Coil, Choke	TEM2011	
L718	23103859	Coil, Choke	TEM2011	
L721	23261974	Coil, Choke	HC5-035	
L903	23237987	Coil, Peaking	TRF4100AC	
L906	23237991	Coil, Peaking	TRF4479AC	
		- CAPACITORS -		
C706	24538103	Cap, Plastic	0.01μF	J 50V
C724	24538103	Cap, Plastic	0.01μF	J 50V
C727	24667470	Cap, Electrolytic	47μF	M 25V
C730	24436101	Cap, Ceramic	100pF	J 50V
C733	24214472	Cap, Ceramic	4700pF	K 500V
C736	24436101	Cap, Ceramic	100pF	J 50V
C739	24214472	Cap, Ceramic	4700pF	K 500V
C742	24677100	Cap, Electrolytic	10μF	M 160V
C745	24677470	Cap, Electrolytic	47μF	M 160V
C748	24677470	Cap, Electrolytic	47μF	M 160V
C751	24436330	Cap, Ceramic	33pF	J 50V
C754	24434560	Cap, Ceramic	56pF	K 500V
C757	24677100	Cap, Electrolytic	10μF	M 160V
C904	24211102	Cap, Ceramic	1000pF	K 2kV
C907	24591104	Cap, Plastic	0.1μF	J 50V
C913	24436391	Cap, Ceramic	390pF	J 50V
C919	24679330	Cap, Electrolytic	33μF	M 250V
C931	24667470	Cap, Electrolytic	47μF	M 25V
C933	24666470	Cap, Electrolytic	47μF	M 16V
C935	24666101	Cap, Electrolytic	100μF	M 16V
C940	24436820	Cap, Ceramic	82pF	J 50V
C942	24538103	Cap, Plastic	0.01μF	J 50V
C944	24212391	Cap, Ceramic	390pF	K 50V
		- RESISTORS -		
⚠R703	24531680	Res, Fusible	68Ω	J 1/2W
R706	24366222	Res, Carbon	2.2kΩ	J 1/6W
R718	24366221	Res, Carbon	220Ω	J 1/6W
R745	24366470	Res, Carbon	47Ω	J 1/6W
R748	24366182	Res, Carbon	1.8kΩ	J 1/6W
R751	24366333	Res, Carbon	33kΩ	J 1/6W
R754	24552100	Res, Oxide Metal	10Ω	J 1/2W
R757	24552301	Res, Oxide Metal	300Ω	J 1/2W
R760	24366820	Res, Carbon	82Ω	J 1/6W
R763	24366820	Res, Carbon	82Ω	J 1/6W
R766	24366152	Res, Carbon	1.5kΩ	J 1/6W
R769	24366122	Res, Carbon	1.2kΩ	J 1/6W
R772	24366152	Res, Carbon	1.5kΩ	J 1/6W
R775	24366122	Res, Carbon	1.2kΩ	J 1/6W
R778	24366683	Res, Carbon	68kΩ	J 1/6W
R781	24366683	Res, Carbon	68kΩ	J 1/6W
R784	24552430	Res, Oxide Metal	43Ω	J 1/2W
R787	24552430	Res, Oxide Metal	43Ω	J 1/2W
R790	24321279	Res, Metal	2.7Ω	J 1/2W
R793	24321279	Res, Metal	2.7Ω	J 1/2W
R796	24554221	Res, Oxide Metal	220Ω	J 2W
R799	24366123	Res, Carbon	12kΩ	J 1/6W
R9003	24366222	Res, Carbon	2.2kΩ	J 1/6W
R904	24366101	Res, Carbon	100Ω	J 1/6W
⚠R907	24555153	Res, Oxide Metal	15kΩ	J 3W
⚠R910	24555153	Res, Oxide Metal	15kΩ	J 3W
R924	24942102	Res, Composition	1kΩ	J 1/2W
R935	24552391	Res, Oxide Metal	390Ω	J 1/2W
R953	24366272	Res, Carbon	2.7kΩ	J 1/6W
R956	24366102	Res, Carbon	1kΩ	J 1/6W
R957	24327131	Res, Metal	130Ω	F 1/4W
R962	24366120	Res, Carbon	12Ω	J 1/6W
R968	24366151	Res, Carbon	150Ω	J 1/6W
⚠R972	24555153	Res, Oxide Metal	15kΩ	J 3W
R980	24366121	Res, Carbon	120Ω	J 1/6W
⚠R984	24552102	Res, Oxide Metal	1kΩ	J 1/2W
R987	24366273	Res, Carbon	27kΩ	J 1/6W
R990	24366472	Res, Carbon	4.7kΩ	J 1/6W
R993	24366202	Res, Carbon	2kΩ	J 1/6W
R996	24366272	Res, Carbon	2.7kΩ	J 1/6W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
R999	24366472	Res, Carbon	4.7kΩ	J 1/6W
RM52	24366153	Res, Carbon	15kΩ	J 1/6W
RM54	24366222	Res, Carbon	2.2kΩ	J 1/6W
RM56	24366472	Res, Carbon	4.7kΩ	J 1/6W
RM58	24366102	Res, Carbon	1kΩ	J 1/6W
RM60	24366102	Res, Carbon	1kΩ	J 1/6W
RM62	24366203	Res, Carbon	20kΩ	J 1/6W
RM64	24366273	Res, Carbon	27kΩ	J 1/6W
RM66	24552471	Res, Oxide Metal	470Ω	J 1/2W
RM68	24366102	Res, Carbon	1kΩ	J 1/6W
RM70	24366471	Res, Carbon	470Ω	J 1/6W
RM72	24366152	Res, Carbon	1.5kΩ	J 1/6W
		- MISCELLANEOUS -		
Q904C	23030211	Screw	3x14mm	
⚠903A	23902886	Socket	9P	
■U0064	23706180	PC Board Assy	CTI	
		- INTEGRATED CIRCUITS -		
QT01	B0384370	IC	TA8814N	
		- TRANSISTORS -		
QT02	23114530	Transistor	2SA933S	
		- CAPACITORS -		
C538	24590333	Cap, Plastic	0.033μF	J 50V
C539	24590333	Cap, Plastic	0.033μF	J 50V
CT01	24538104	Cap, Plastic	0.1μF	J 50V
CT02	24232103	Cap, Ceramic	0.01μF	Z 50V
CT03	24590333	Cap, Plastic	0.033μF	J 50V
CT04	24590333	Cap, Plastic	0.033μF	J 50V
CT05	24538104	Cap, Plastic	0.1μF	J 50V
		- RESISTORS -		
RT01	24366102	Res, Carbon	1kΩ	J 1/6W
RT02	24366561	Res, Carbon	560Ω	J 1/6W
RT03	24366821	Res, Carbon	820Ω	J 1/6W
RT04	24366271	Res, Carbon	270Ω	J 1/6W
RT05	24366153	Res, Carbon	15kΩ	J 1/6W
RT06	24366183	Res, Carbon	18kΩ	J 1/6W
RT09	24366473	Res, Carbon	47kΩ	J 1/6W
RT10	24366822	Res, Carbon	8.2kΩ	J 1/6W
RT11	24366822	Res, Carbon	8.2kΩ	J 1/6W
RT27	24366822	Res, Carbon	8.2kΩ	J 1/6W
		- MISCELLANEOUS -		
PT01A	23368130	Plug	10P	
WT01	23250875	Coil, Delay	TRF2080	
WT01B	23960136	Bond		
■U0065	23706181	PC Board Assy	LTI	
		- INTEGRATED CIRCUITS -		
QL01	B0385400	IC	TA1200N	
		- TRANSISTORS -		
QL02	23114528	Transistor	2SC1740S	
QL03	23114528	Transistor	2SC1740S	
		- DIODES -		
DL01	23118859	Diode	1SS133	
DL02	23118859	Diode	1SS133	
DL03	23115537	Diode	1SS131	
		- COILS -		
LL01	23238708	Coil, Peaking	TRF4330AJ	
		- CAPACITORS -		
CL01	24669229	Cap, Electrolytic	2.2μF	M 50V
CL02	24538104	Cap, Plastic	0.1μF	J 50V
CL03	24473330	Cap, Ceramic	33pF	J 50V
CL04	24232103	Cap, Ceramic	0.01μF	Z 50V
CL05	24747228	Cap, Electrolytic	0.22μF	M 50V
CL06	24669229	Cap, Electrolytic	2.2μF	M 50V
CL07	24436101	Cap, Ceramic	100pF	J 50V
CL08	24669100	Cap, Electrolytic	10μF	M 50V
CL09	24232103	Cap, Ceramic	0.01μF	Z 50V
CL10	24666101	Cap, Electrolytic	100μF	M 16V
CL11	24669229	Cap, Electrolytic	2.2μF	M 50V
CL12	24747228	Cap, Electrolytic	0.22μF	M 50V
CL13	24473200	Cap, Ceramic	20pF	J 50V
CL15	24747339	Cap, Electrolytic	3.3μF	M 50V
CL16	24436100	Cap, Ceramic	10pF	J 50V
		- RESISTORS -		
RL03	24366102	Res, Carbon	1kΩ	J 1/6W

LOCATION NUMBER	PART NUMBER	DESCRIPTION		
RL04	24366101	Res, Carbon	100Ω	J 1/6W
RL05	24366394	Res, Carbon	390kΩ	J 1/6W
RL06	24366105	Res, Carbon	1MΩ	J 1/6W
RL07	24366394	Res, Carbon	390kΩ	J 1/6W
RL08	24366184	Res, Carbon	180kΩ	J 1/6W
RL09	24366153	Res, Carbon	15kΩ	J 1/6W
RL10	24366332	Res, Carbon	3. 3kΩ	J 1/6W
RL11	24366105	Res, Carbon	1MΩ	J 1/6W
RL12	24366221	Res, Carbon	220Ω	J 1/6W
RL13	24366102	Res, Carbon	1kΩ	J 1/6W
RL14	24366102	Res, Carbon	1kΩ	J 1/6W
RL15	24366101	Res, Carbon	100Ω	J 1/6W
RL16	24366101	Res, Carbon	100Ω	J 1/6W
RL18	24366102	Res, Carbon	1kΩ	J 1/6W
RL19	24366332	Res, Carbon	3. 3kΩ	J 1/6W
RL20	24366221	Res, Carbon	220Ω	J 1/6W
RL21	24366682	Res, Carbon	6. 8kΩ	J 1/6W
RL22	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RL23	24366102	Res, Carbon	1kΩ	J 1/6W
RL24	24366273	Res, Carbon	27kΩ	J 1/6W
RL25	24366434	Res, Carbon	430kΩ	J 1/6W
RL27	24366563	Res, Carbon	56kΩ	J 1/6W
RL28	24366105	Res, Carbon	1MΩ	J 1/6W
		- MISCELLANEOUS -		
PL01A	23367722	Plug	13P	
■U007	23704318	PC Board Assy	Digital CONV	
■U008	23705127	PC Board Assy	Sub Power2	
		- TRANSISTORS -		
Q873	A6317440	Transistor	2SC1815-Y	
		- DIODES -		
DD12	23316317	Diode, Zener	UZ7. 5BSA	
DD13	A7150258	Diode	1SS176FA	
		- CAPACITORS -		
CD15	24082318	Cap, Plastic	0. 1μF	M 250V
CD16	24082318	Cap, Plastic	0. 1μF	M 250V
		- RESISTORS -		
RD50	24007515	Res, Cement	0. 51Ω	K 15W
RD51	24004914	Res, Metal	5. 6MΩ	J 1/2W
RD52	24007061	Res, Cement	1. 8Ω	G 2W
RD53	24510479	Res, Cement	4. 7Ω	J 5W
RD54	24552680	Res, Oxide Metal	68Ω	J 1/2W
RD55	24366472	Res, Carbon	4. 7kΩ	J 1/6W
RD56	24366682	Res, Carbon	6. 8kΩ	J 1/6W
		- MISCELLANEOUS -		
⚠F810	23144531	Fuse	250V, 6. 3A	
F810A	23165433	Fuse Holder		
P893	23368020	Plug	2P	
P894	23368020	Plug	2P	
S801	23146916	Relay	5A DC12V	
⚠T810	23211002	Line Filter	TRF3173	
■U0091	23705915	PC Board Assy	Connect1	
■U0092	23705916	PC Board Assy	Connect2	
		- MISCELLANEOUS -		
P722	23164787	Plug	7P	
P724	23164788	Plug	8P	
P732	23164787	Plug	7P	
P734	23164788	Plug	8P	

LOCATION NUMBER	PART NUMBER	DESCRIPTION

- MECHANICAL PARTS -

LOCATION NUMBER	PART NUMBER	DESCRIPTION	
A101	23800611	Wood Cabinet	
A102	23800609	Metal Box(P5031U)	
A102	23800610	Metal Box(P5032U)	
A103	23476917	Screen Holder	
A121	23476918	Screen Holder	
A122	23476916	Screen Holder	
A123	70391438	Screw	3x6mm
A130	23560031	Tape	
A140	23802043	Front Cover	
A142	23802044	Front Cover	
A190	23476692	Screen Protector	
A191	23476693	Screen Protector	
A192	23710098	Screw	4x8mm
A501	23730171	Bolt	8x25mm
A701	23525253	Case(P5031U)	
A701	23525254	Case(P5032U)	
A703	23941621	Sheet	
B125	70391440	Screw	3x10mm
B126	23874860	Knob	
B127	70391440	Screw	3x10mm
B152	70391081	Screw	4x12mm
B173	70391081	Screw	4x12mm
E966	23960136	Silicone Bond	
E976	23960136	Silicone Bond	
E986	23960136	Silicone Bond	
K103	23430111	Lens Assy	
K501	23837418	Screen	Lenticular
K502	23837443	Screen	Fresnel
K601	23430116	Mirror	
⚠K870	23125466	Fan	D13M1202A, DC12V
⚠L462	23231127	Deflection Yoke	TDY7079S
⚠L463	23231128	Deflection Yoke	TDY7079S
⚠L464	23231129	Deflection Yoke	TDY7079S
L472	23102445	Coil, Focus	MAG-1096
L473	23102445	Coil, Focus	MAG-1096
L474	23102445	Coil, Focus	MAG-1096
⚠P801	23176937	Power Cord	125V, 13A
PS02A	23730899	Screw	
PV75A	23730899	Screw	
⚠T461A	23192900	Anode Cap	TCCP5144
⚠V901R	23795014	Coupling CRT(Red)	(P5031U)
⚠V901R	23795109	Coupling CRT(Red)	(P5032U)
⚠V902G	23795015	Coupling CRT(Green)	(P5031U)
⚠V902G	23795110	Coupling CRT(Green)	(P5032U)
⚠V903B	23795016	Coupling CRT(Blue)	(P5031U)
⚠V903B	23795111	Coupling CRT(Blue)	(P5032U)
Y101	23552576	Owners Manual	English
Y103	23368644	Cable	DIN 5P
Y120	23943846	Cover	
Y200	23948685	Accessory for Assembling	
⚠Z410	23110834	Focus Pack	TPA6026

LOCATION NUMBER	PART NUMBER	DESCRIPTION

SPECIFICATION

Type		50″ Projection Unit	
TV System		3.58NTSC, 4.43NTSC, PAL	
Projection tube		7″ CRT × 3	
Resolution		800 line or more (Horizontal) 350 line or more (Vertical)	
Usable field of view		150° (Horizontal), 60° (Vertical)	
Usable humidity		30~70%	
Usable temperature		5~35 °C (41~95°F)	
Input signals			
	Video input	Input terminal Input level	BNC connector × 1 1V(p-p) (75 Ω) Standard level
	Video output	Output terminal	BNC connector × 1
	Y/C separate input	Input terminal	Luminance (Y) .... BNC connector × 1 Chrominance (C) .... BNC connector × 1
		Input level	Luminance (Y) .... 1V(p-p) (75 Ω) Chrominance (C) .... 0.286V(p-p) (75 Ω)
	RGB input	Input terminal	D SUB 15-pin (female) connector × 1
		Input level	R, G, B signal .... 0.7V(p-p) (75 Ω) Sync signal .... 0.3V(p-p) (75Ω)
	Remote control input	Input terminal Signal input	ø3.5mm terminal Remote signal, +3V, GND
	RS-232C port	Input terminal Speed Mode	D SUB 25-pin (female) connector × 1 1,200, 2,400, 4,800, 9,600 baud No parity, 8 bit, 1 stop bit
Combination I/O		Terminal	DIN 5-pin connector × 2
White balance switch		3 mode selectable	
Electrical requirement		AC 100~240V, 50/60Hz	
Power consumption		260W (300VA) (at 120V AC)	
Dimensions		P5031U 1025 (W) × 1169.5 (H) × 665 (D) mm (40.4″ (W) × 46.0″ (H) × 26.2″ (D)) P5032U 1025 (W) × 1169.5 (H) × 665 (D) mm (40.4″ (W) × 46.0″ (H) × 26.2″ (D)) (The protrusion is not included.)	
Weight		90kg (198 lbs.)	
Accessories		Control cable (DIN 5-pin connector)	

* A control cable is supplied for controlling video wall projection unit being used together.

* The specifications and design of this product are subject to change without notice, due to improvement.